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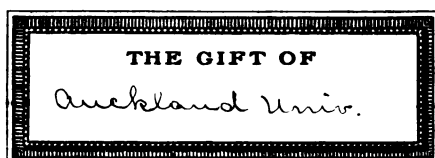
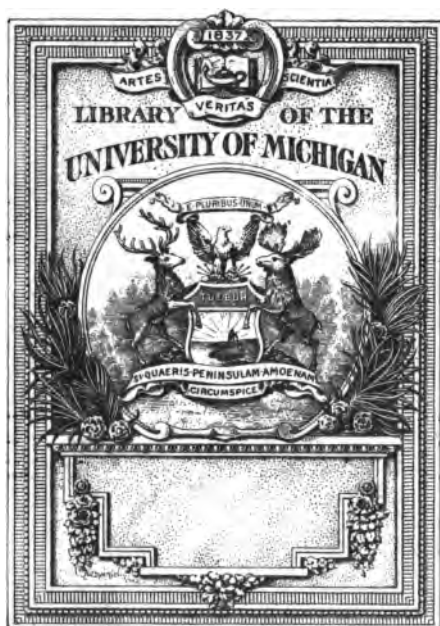
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AUCKLAND

University College

(UNIVERSITY OF NEW ZEALAND).

CALENDAR


FOR THE YEAR 1904.

Auckland:

PRINTED FOR THE UNIVERSITY COLLEGE

MDCCCIV.

Auckland Univ. Coll. 2-10-129



PRINTED BY WILSON AND HORTON.

—
1904.



III.

Auckland University College.

Visitor :

THE HONORABLE THE MINISTER OF EDUCATION.

Council :

CHAIRMAN—THE HONBLE. SIR GEORGE MAURICE O'RORKE,
M.A., HON. LL.D. (A. 1)

THE MAYOR OF AUCKLAND, HON. EDWIN MITCHELSON*

THE CHAIRMAN OF THE AUCKLAND BOARD OF EDUCATION,
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AND C.M. EDIN. (C. 1)

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WILLIAM COLEMAN, Esq. (B. 2)

Registrar :

DAVID WILLIAMSON RUNCIMAN, M.A.

* *Ex officio.*

A. Appointed by the Governor in Council.

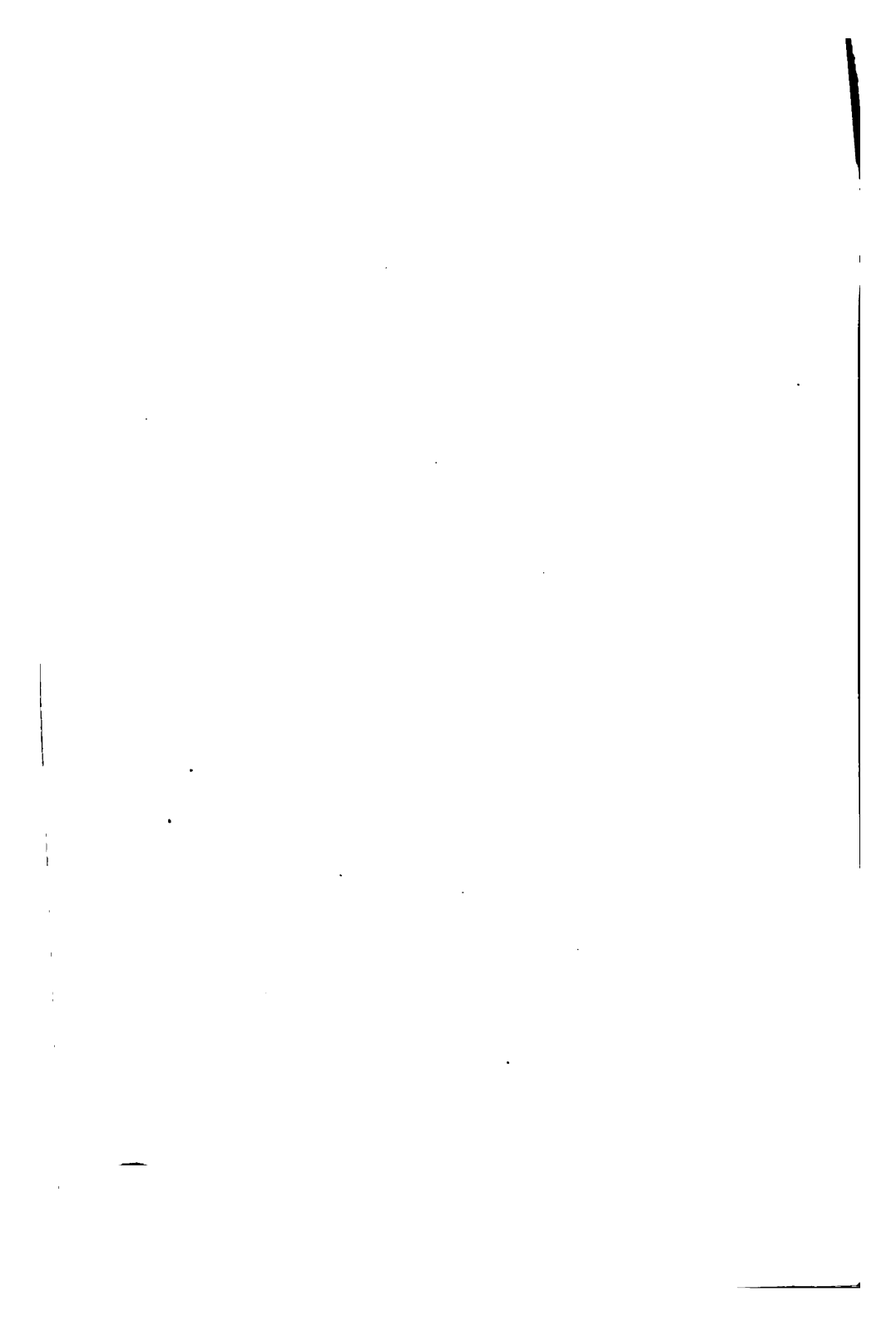
B. Elected by the Members of the General Assembly resident in
the Provincial District of Auckland.

C. Elected by Graduates.

1. Until May, 1904.

2. Until May, 1905.

3. Until May, 1906.



Professors and Lecturers.



Professors:

Classics.

HENRY ARNOLD TALBOT-TUBBS, M.A. Oxford; sometime Craven Fellow, and Arnold Historical Prizeman.

English.

CHARLES WILLIAM EGERTON, M.A. Dublin; Senior Moderator and Gold Medallist, 1885; Vice-Chancellor's Prizeman in English Prose Composition.

Mathematics.

HUGH WILLIAM SEGAR, M.A. Cambridge; Second Wrangler, 1890; Smith's Prizeman, 1892.

Chemistry and Experimental Physics.

FREDERIC DOUGLAS BROWN, Hon. M.A. Oxford, B.Sc. London, F.C.S.

Biology and Geology.

ALGERNON PHILLIPS WITHIEL THOMAS, M.A. Oxford, F.L.S., F.G.S.; Burdett-Coutts University Scholar.

Music.

WILLIAM EDWIN THOMAS, Mus. Doc., Oxford; late Director of the Music at All Saints' School, Bloxham, Oxford; late Organist and Choirmaster of St. Clement's, Bournemouth; late Examiner of the London College of Music; late Hon. Local Examiner of R.A.M., London.

Lecturers:

Modern Languages.

MAXWELL WALKER, M.A.

Law.

H. DEAN BAMFORD, B.A., LL.D.; Barrister at Law.

VII.

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AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

JANUARY—XXXI.

1	F	
2	S	
3	S	
4	M	
5	TU	
6	W	
7	TH	
8	F	
9	S	
10	S	
11	M	
12	TU	
13	W	
14	TH	
15	F	
16	S	
17	S	
18	M	Meeting of Recess Committee of Senate on results of December Examination held about this time. Council meets on 19th.
19	TU	
20	W	
21	TH	
22	F	
23	S	
24	S	
25	M	
26	TU	
27	W	
28	TH	
29	F	
30	S	
31	S	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

FEBRUARY—XXIX.

1	M	
2	TU	
3	W	
4	TH	
5	F	
6	S	
7	S	
8	M	
9	TU	
10	W	
11	TH	
12	F	
13	S	
14	S	
15	M	First Meeting of College Council, 1883, on 19th.
16	TU	Council meets.
17	W	Senate meets at Wellington. Applications for
18	TH	<i>ad eundem</i> degrees not received after this
19	F	date.
20	S	The Bowen Prize awarded during Session of
21	S	Senate.
22	M	
23	TU	
24	W	
25	TH	
26	F	
27	S	
28	S	
29	M	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

MARCH—XXXI.

1	TU	
2	W	
3	TH	
4	F	
5	S	
6	S	
7	M	First Term begins.
8	TU	
9	W	
10	TH	Candidates' notices, with fee for April Special
11	F	Medical Examination, must be in by this
12	S	date.
13	S	
14	M	
15	TU	
16	W	Council meets.
17	TH	
18	F	
19	S	
20	S	
21	M	
22	TU	
23	W	
24	TH	
25	F	
26	S	
27	S	
28	M	
29	TU	
30	W	
31	TH	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

APRIL—XXX.

1	F	Good Friday. Easter Recess begins.
2	S	
3	S	Easter Sunday.
4	M	
5	TU	Easter Recess ends.
6	W	
7	TH	
8	F	
9	S	Special Meeting of Senate to consider results of
10	S	Degree Examinations held about this date.
11	M	Special Medical Examination held during this
12	TU	month if ordered.
13	W	
14	TH	
15	F	
16	S	
17	S	
18	M	
19	TU	Council meets.
20	W	
21	TH	
22	F	
23	S	
24	S	
25	M	
26	TU	
27	W	
28	TH	
29	F	
30	S	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

MAY—XXXI.		
1	S	
2	M	Candidates' notices, accompanied by fees, for M.A., Honours in Arts, Science or Law, Mus. B., Mus. D., LL.D., Senior and Tinline Scholarships, and all Engineering Examinations, must be in by this date, or with two guineas extra by May 8th.
3	TU	
4	W	
5	TH	
6	F	
7	S	
8	S	
9	M	First Term ends.
10	TU	
11	W	
12	TH	
13	F	
14	S	
15	S	
16	M	University College opened by His Excellency the Governor (Sir Wm. Jervois, G.C.M.G.), 1883.
17	TU	
18	W	
19	TH	
20	F	
21	S	Council meets on 19th.
22	S	
23	M	
24	TU	
25	W	
26	TH	
27	F	
28	S	
29	S	
30	M	
31	TU	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

JUNE—XXX.

1	W	
2	Th	
3	F	
4	S	
5	S	
6	M	Second Term begins.
7	Tu	
8	W	
9	Th	
10	F	
11	S	
12	S	
13	M	
14	Tu	
15	W	
16	Th	
17	F	
18	S	
19	S	
20	M	
21	Tu	Council meets.
22	W	
23	Th	
24	F	
25	S	
26	S	
27	M	
28	Tu	
29	W	
30	Th	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

JULY—XXXI.		
1	F	
2	S	
3	S	
4	M	
5	Tu	
6	W	
7	Th	
8	F	
9	S	
10	S	
11	M	
12	Tu	
13	W	
14	Th	
15	F	
16	S	
17	S	
18	M	
19	Tu	Council meets.
20	W	
21	Th	
22	F	
23	S	
24	S	
25	M	
26	Tu	
27	W	
28	Th	
29	F	
30	S	
31	S	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

AUGUST—XXXI.		
1	M	
2	TU	
3	W	
4	TH	
5	F	
6	S	
7	S	
8	M	
9	TU	
10	W	Second Term ends.
11	TH	
12	F	
13	S	Undergraduates exempted under Statute "Terms
14	S	and Lectures" must give notice by the
		15th to the College Registrar of their in-
		tention to come up for Annual Examination.
15	M	Council meets.
16	TU	
17	W	
18	TH	
19	F	
20	S	
21	S	
22	M	
23	TU	
24	W	
25	TH	
26	F	
27	S	
28	S	
29	M	"New Zealand University Act, 1874," passed.
30	TU	
31	W	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

SEPTEMBER—XXX.

1	TH	Candidates' notices with fees for the November Examinations (except as shown on page 12 of University Calendar) not received by the University Registrar after this date, except with two guineas extra up to Sept. 8th.
2	F	
3	S	
4	S	
5	M	Third Term begins.
6	TU	
7	W	
8	TH	
9	F	"Auckland University College Act, 1882," passed on 11th.
10	S	
11	S	
12	M	
13	TU	Council meets.
14	W	
15	TH	
16	F	
17	S	
18	S	
19	M	
20	TU	
21	W	
22	TH	
23	F	
24	S	
25	S	
26	M	
27	TU	
28	W	
29	TH	
30	F	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

OCTOBER—XXXI.

1	S	Last day of receiving notices for Annual Examination ; but names may be received by the Registrar up to the eighth day of October, on payment of a fine of half-a-guinea. “New Zealand University Amendment Act, 1902,” passed on 3rd.
2	S	
3	M	
4	Tu	
5	W	
6	Th	
7	F	
8	S	
9	S	
10	M	Council meets. Candidates for the December Examinations must send in notices and fees to the University Registrar by a date to be found in the University of New Zealand Calendar for 1904-1905.
11	Tu	
12	W	
13	Th	
14	F	
15	S	
16	S	
17	M	
18	Tu	
19	W	
20	Th	
21	F	
22	S	
23	S	
24	M	
25	Tu	
26	W	
27	Th	
28	F	
29	S	
30	S	
31	M	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

NOVEMBER—XXX.

1	TU	Examinations for Degrees in Arts, etc., held this month.
2	W	
3	TH	
4	F	
5	S	
6	S	
7	M	King's Birthday Third Term ends.
8	TU	
9	W	
10	TH	
11	F	
12	S	
13	S	Council meets.
14	M	
15	TU	
16	W	
17	TH	
18	F	
19	S	
20	S	
21	M	
22	TU	
23	W	
24	TH	
25	F	
26	S	
27	S	
28	M	
29	TU	
30	W	

AUCKLAND UNIVERSITY COLLEGE CALENDAR—1904.

DECEMBER—XXXI.

1	TH	
2	F	
3	S	
4	S	
5	M	
6	TU	
7	W	
8	TH	
9	F	
10	S	
11	S	
12	M	
13	TU	
14	W	
15	TH	
16	F	
17	S	
18	S	
19	M	
20	TU	Council meets.
21	W	
22	TH	
23	F	
24	S	
25	S	Christmas.
26	M	
27	TU	
28	W	
29	TH	
30	F	
31	S	

Auckland University College.

HISTORICAL SKETCH.

THE introduction of University Education into New Zealand was effected by the Superintendent and Provincial Council of Otago, who, in 1869, passed an Ordinance under which the University of Otago was established. Following closely on the founding of this institution was the establishment of the University of New Zealand under an Act of the General Assembly, "The New Zealand University Act, 1870." This University subsequently received a Royal Charter, whereby the Degrees which it confers are declared entitled to "rank, precedence, and consideration" throughout the British Empire, "as fully as if the said Degrees had been conferred by any University of the United Kingdom." It was apparently contemplated by Parliament (*vide* section 19 of the Act last quoted) that the New Zealand University and the Otago University should be amalgamated; but the negotiations for this purpose having failed, the two institutions remained for some time distinct bodies. In the year 1874, however, the University of Otago surrendered or put in abeyance its power of conferring Degrees, and became affiliated to the University of New Zealand; and at the same time it was stipulated that the University of New Zealand should not directly exercise functions of teaching.

In the year 1873 the Superintendent and Provincial Council of Canterbury passed an Ordinance for founding "The Canterbury College," and the College was accordingly established with the same standard of University education as that of the University of Otago, but without the power of conferring Degrees.

In December, 1878, a Royal Commission on University and Secondary Education was appointed by the Governor of New Zealand. This Commission, of which Sir George Maurice O'Rorke was Chairman, met in January, 1879, and on the 9th

of July following reported that two Colleges, with an income of £4,000 each, ought to be established in Auckland and Wellington, and that suitable buildings, at a cost of £12,500 each, should be erected in those cities. In the following year the Royal Commission repeated these recommendations.

"The Auckland University College Act, 1882," which became law on the 13th of September in that year, definitely established the Auckland University College, and endowed it with a statutory grant of £4,000 per annum. By "The Auckland University College Reserves Act, 1885," three blocks of land, containing about 10,000 acres each, and a block containing about 354 acres, which had been devoted to the purpose of promoting higher education in the Province of Auckland, became vested in the Council of University College.

The Auckland University College was affiliated to the University of New Zealand, by the Senate of the University, on the 6th of March, 1883; and on the 21st of May in the same year the College was opened by His Excellency the Governor of New Zealand, Sir William F. Drummond Jervois, G.C.M.G.

The recommendation made by the Royal Commission, that College buildings should be erected, has not been carried into effect. The building in Eden Street, which was formerly the District Courthouse, was in 1883 placed at the disposal of the College Council by the Government, for the purposes of College work. The large room of this building is formed into a lecture-hall, and additions have been made for the formation of laboratories. In "The Special Powers and Contracts Act, 1885," the Governor was empowered, when the offices then occupied by the Survey and Crown Lands Departments in Auckland should be vacated, to transfer those as well as the District Courthouse mentioned above, to the College Council. The block of land on which these buildings stand extends from Parliament Street to Beach Road, containing an area of 1 acre 11 perches. This transfer was carried into effect in the year 1890; and by an expenditure of about £1,200 of the University College funds the premises were rendered fairly suitable to the purposes of the College.

The Governing Body of the College is constituted and incorporated by the Act of 1882, and is styled "The Auckland University College Council." It consists of eleven members, two of whom are *ex officio*, viz., the Mayor of the City of

Auckland and the Chairman of the Auckland Board of Education. The other nine form three groups, consisting of three members each, viz., three elected by the members of the General Assembly resident in the Provincial District of Auckland, three appointed by the Governor in Council, and three elected by the Graduates of the New Zealand University on the books of the College. These last three members were appointed by the Governor in Council until the College numbered thirty Graduates. Elections were made by the Graduates for the first time in 1890. One member of each group retires annually. The Minister of Education is the Visitor of the College. The Chairman of the Council is elected by the Council. The Council meets statedly at least once a month, five members forming a quorum. "The Professorial Board," which is constituted by the Act, possesses, "subject to the approval of the Council," the power of fixing the course of study and the days and hours of lectures and examinations, and prescribing the subjects of examinations for scholarships, exhibitions, and prizes; and it has, "subject to a right of appeal to the Council," a general control over the discipline of the students, the management of the library, and the direction of the College servants. It elects a Chairman annually. Each Professor or Lecturer is entitled to receive, in addition to his salary, the fees that are paid by students for attendance at his lectures.

Mr. Thomas Bannatyne Gillies, a Judge of the Supreme Court of New Zealand, presented to the College Council, in the year 1884, the sum of £3,000 (three thousand pounds), for the purpose of founding two Science Scholarships, to be called respectively the "Sinclair" and the "Gillies" Scholarship. They were so named in memory of Dr. Andrew Sinclair, uncle of the late Mrs. Gillies, and in memory of Mrs. Gillies herself. This munificent gift was forthwith utilised in the manner prescribed; but these Scholarships had to be put in abeyance for some years in consequence of the falling off in the value of the land on which the money was invested. They have now, however, been revived, and are at present of the value of £70 per annum each.

The Auckland Amateur Opera Club, in the year 1890, presented to the College Council the sum of two hundred guineas to be expended in that and the two following years for the encouragement of the study of Music. Money Exhibitions, accordingly, were granted, to be competed for by students

attending, or about to attend, the classes of the School of Music in the College. The results were considered to be very satisfactory, but the Exhibitions ceased to exist when the two-hundred guineas were expended. The Countess of Onslow, in 1891, gave two silver medals to be awarded to the most deserving of those students in the Music classes whom the Regulations excluded from competing for Exhibitions. Similar gifts were made for the years 1892, 1893, 1894.

Lady Glasgow provided similar medals for 1895, 1896, and 1897, and Lady Ranfurly has agreed to continue the medals to take the place of those provided by Lady Glasgow.

A valuable addition was made to the College Library on the 31st March, 1894, by the late Professor Charles Alexander Maclean Pond, who had held the chair of Classics and English from July, 1891, to October, 1893. The whole of his library, consisting of upwards of a thousand volumes, of standard English and Classical works, he bequeathed to the University College, and the books are now placed in a special press in the Library, each book being labelled as the bequest of the lamented Professor.

The Council is under great obligation to the late Mr. James McCosh Clark, who was Mayor of the City of Auckland during the years 1881, 1882, and 1883, and who, on the termination of his Mayoralty, was presented with a six-inch telescope by the citizens of Auckland as an appreciation of his public services, and as a mark of the citizens' respect and esteem for Mrs. Clark, during her husband's Mayoralty. The use of this telescope has been placed at the service of the College, and it is now mounted at the top of the brick tower attached to the College building. The thanks of the College were tendered to Mr. and Mrs. Clark, for granting the use of the telescope to the College, by resolution unanimously passed by the Council on the 20th December, 1894, and similar thanks were given on the 16th November, 1896, to Mr. and Mrs. Clark for granting the College the use of a celestial globe.

By the will of the late Mr. J. L. Sinclair, who died at Otahuhu, on 12th November, 1895, the testator bequeathed to the Auckland University College Council all such of his books as the Professorial Board of the College might consider suitable for the College Library. 580 vols. were selected and added to the Library, each book bearing a label showing that it was bequeathed to the Library by the late James Leask Sinclair

In the year 1897, it was found necessary to provide a new Physical Laboratory at a cost of £328 4s. 6d.

On the 20th June, 1898, the Council requested the Chairman (Sir Maurice O'Rorke) to draw the attention of the Government to the insufficiency of the accommodation in the College buildings for the classes attending lectures, and to the inability of the Council to provide the requisite accommodation out of its current revenue. This application was attended with success, so that on the 28th November, 1898, the Chairman was able to report that the Government had met the application in a liberal spirit, and that £1,000 had been cheerfully voted by Parliament. The Council tendered a hearty vote of thanks to Sir Maurice O'Rorke for his successful efforts to obtain this grant. The Government further showed their liberality by permitting Mr. C. R. Vickerman, of the Public Works Department, to prepare the necessary plans and to supervise the erection of the buildings. Tenders were called for, and that of Mr. John E. Guthrie, amounting to £1,116 11s., was accepted on the 29th of March, 1899. Other additions were afterwards found to be desirable, the cost of which was defrayed out of the funds of the College, and the total amount paid to the contractor was £1,213 6s. 6d. It was agreed to spend £120 on securing proper precautions against fire, and after providing suitable furniture the total cost amounted to £1,558 5s. 1d. The new rooms are admirably adapted for the purposes for which they have been provided, and will be sufficient for the requirements of the College for many years to come.

On 11th May, 1900, a letter was received from the Secretary of the Education Department, intimating the establishment of a Sir George Grey Scholarship in Auckland University College, and enquiring whether the Council of the College would undertake the awarding of the Scholarship for the current year (1900), on certain specified conditions. The offer was accepted, and the Scholarship was awarded accordingly. The Scholarship is to be offered year by year, and a competition for it took place last year (1902), and it was again awarded.

College Regulations.

TERMS, FEES, ATTENDANCE AT LECTURES.

1. There shall be in each year three Terms. The First Term shall begin on the first Monday in March, and end on the tenth of May. The Second Term shall begin on the first Monday in June, and end on the tenth of August. The Third Term shall begin on the first Monday in September, and end on the tenth of November. The Easter Recess extends from Good Friday to Easter Tuesday, both days inclusive.

2. The fees for lectures shall be ten shillings per Term for a course occupying one hour per week, one pound per Term for a course occupying two hours per week, and so on proportionally. For laboratory instruction the fees shall be ten shillings per term for one half-day per week, one pound per term for two half-days per week, and so on proportionally. Provided that attendance at a course of lectures during the First and Second Terms shall entitle to exemption from payment of fee for attendance at a course of lectures on the same subject and not occupying a greater amount of time per week during the Third Term; and similarly as to attendance in laboratory. The Laboratory Fee for Honours Students in Science is £2 per Term or £4 per Session.

3. On payment of the fee at the office of the College a ticket of admission shall be issued, which must be countersigned by the Professor, or Lecturer. All fees must be paid within three weeks from the commencement of the Term. The first lecture of every course will be free.

4. Admission to lectures or laboratories shall not be restricted to undergraduates, that is to say, matriculated students, but shall be open to all persons who have complied with the preceding Regulation No. 3.

5. Each Professor and Lecturer shall keep a roll showing the number and names of the students present at each lecture. These rolls shall be laid on the table when required by the Council, and shall be preserved for reference.

ANNUAL EXAMINATION.

6. The Annual Examination shall be held in the last part of the Third Term, at such time approved by the Council, as will allow the publication of the complete results by the last day of the Term.

7. Every student who shall have attended the full course of lectures during at least two Terms of the year, shall be entitled to be examined at the Annual Examination in that subject, without payment of any examination fee.

8. A fee of one guinea shall be paid for the Annual Examination in each subject which the candidate shall select, and on which he shall not have attended lectures. Students who are examined out of Auckland are required to pay an extra fee of half-a-guinea for each subject on which they are examined, to be paid to the Registrar at least ten days before the commencement of the Examination; but when at any place of examination only one student is examined, the extra fee shall be one guinea for each subject in which such student shall be examined.

9. All candidates for the Annual Examination must give in their names and the examination fees due (if any) to the Registrar on or before the first day of October in each year; but names may be received by the Registrar up to the eighth day of October in each year on payment of a fine of half-a-guinea.

10. As soon as practicable after the Annual Examination, there shall be published a list of undergraduates who have kept the Terms of the year, and also lists of those persons who have passed the examinations in the several subjects respectively. In each subject there shall be three classes, the First Class being the highest. In the First and Second Classes the names shall be arranged in order of merit; in the Third Class in alphabetic order

THE KEEPING OF TERMS.

(N.B.—The following Regulations apply to undergraduates who desire to keep Terms with a view to examination by the University of New Zealand.)

11. Undergraduates shall be held to have kept Terms for the year in any subject who shall have (a) attended during the year at least three-fourths of the prescribed lectures, and (b) passed the Annual Examination in that subject.



The following are the subjects in which Terms may be kept :—

1. Latin
2. Greek
3. English
4. French
5. German
6. Hebrew
7. General History and Political Economy
8. Jurisprudence and Constitutional History
9. Pure Mathematics
10. Applied Mathematics
11. Physical Science
12. Chemistry
13. Biology
14. Geology
15. Mental Science
16. Music

12. (1) Undergraduates must, to complete their first year, keep Terms in three subjects. For their second year they must offer for examination such subjects as they intend to take for the first section of their Degree, but may be credited with the year by keeping Terms in three such subjects. For their third year they must keep Terms in such subjects as they intend to take to complete their degree.

(2) But undergraduates exempted by University Statute from attendance upon lectures shall be credited with their Terms if they shall have passed the examination for the year in the required subjects.*

13. Every undergraduate intending to present himself for any University Examination for a Degree, other than the Degree of Bachelor of Medicine, or any of the professional branches of the

* For students exempted by University Statute from attendance upon lectures, see University Calendar, Statutes "Terms and Lectures," chap. vi., reg. iii.

Degree of Bachelor of Science, shall, when he signifies to the Chancellor the subjects in which he elects to be examined, forward a duplicate of such notice to the Registrar of Auckland University College.

14. Undergraduates who intend to present themselves for examination in Physical Science, or in Biology, Geology, or Chemistry, must produce evidence that they have in the same, or a previous year, gone through, to the satisfaction of the Professor, a course of practical work in the subject.

REGULATIONS RESPECTING THE COLLEGE LIBRARY

15. The Assistant Librarian will attend daily for the purpose of students borrowing and returning books during Term time from 10 a.m. till 12 noon, and 4 p.m. till 6 p.m.; during vacation from 10 a.m. to 12 noon. Books are to be taken out only at the times specified. During Term the Library will be open to students for the purpose of reading till lectures close

16. A Catalogue of the books shall be kept on the table.

17. No person shall make any mark in or upon any book, or fold down a leaf, or otherwise deface any book belonging to the Library. No one shall lay the paper on which he is writing on the book he is using.

18. All members of the Auckland University College shall be permitted to use the Library, but the privilege of taking out books shall be reserved for members of the Council, Professors, Lecturers, Graduates and Students attending Lectures.

19. All books, except such as may be specially reserved, may be taken out of the Library; but no person shall have in his possession more than two volumes at a time. Persons who retain a book for more than fourteen days shall be liable to a fine of threepence per day, or portion of a day, for each day for which it is retained beyond that period. But students who have not paid any fines due by them are not permitted to take books out of the Library.

20. Text-books prescribed for the current year shall in no case be removed from the Library.

21. Before removing a volume, the Assistant Librarian shall enter in a book to be kept in the Library, the name of the borrower, the title of the volume, and the date of removal. The

borrower shall be responsible for its safe return, or, in the event of damage or loss, shall be liable to replace it at his own cost.

22. A notice-book shall be provided in the Library, in which a student desirous of obtaining a book already in circulation may enter his name and the title of the book desired. No person on returning a volume to the Library shall borrow it for a second period, unless he shall have satisfied himself by reference to the notice-book that the volume is not otherwise required.

MISCELLANEOUS.

23. The Calendar shall be distributed *free* to all matriculated students who are attending lectures, but to all others a charge shall be made of one shilling.

24. Students may obtain the use of a locker for the Session on payment of 2s. per annum to the Registrar.

25. Students are not permitted to use the telephone except with consent asked and obtained from the Registrar, and messages for students transmitted through the telephone are not to be delivered.

PREMIUMS.

26. There shall be awarded, after the Annual Examination, ten Premiums of the value of three guineas each, consisting of books or scientific instruments, in the following subjects:—

Latin
 English
 Pure Mathematics
 Applied Mathematics
 Chemistry
 Physics
 Biology
 Geology
 French
 Jurisprudence and Constitutional History

27. In each subject the Premium shall be open for competition to first and second years' students in that subject ; and it shall be awarded to the student recommended for the prize by the examiner, who in making the recommendation shall take into consideration the attendance, conduct, and progress of the student, as well as the number of marks gained at the examination.

28. Each prize-winner shall be allowed to select, subject to the approval of the Examiner, the books or scientific instruments to be received as a Premium ; and if the cost exceed three guineas, the excess shall be defrayed by the student.

29. Each prize volume shall be well bound and stamped with the College Arms, and shall be distinctly labelled according to the subject in which it shall be awarded. Each scientific instrument awarded shall bear a suitable inscription.

30. If a student wins any of the above prizes in his or her First Year, such student shall not be allowed to win that prize or prizes in the Second Year, but may compete for a prize of a different denomination.

PRIZES IN EARLY ENGLISH.

31. The Early English Text Society have offered for competition each year certain volumes of their publications. These books will be awarded on the results of an examination to be held early in the Third Term by the Professor of English Language and Literature. Students are required to notify to the Registrar their intention of competing for these prizes before the end of the Second Term.*

* For course see Syllabus.

REGULATIONS FOR THE SIR GEORGE GREY SCHOLARSHIP, 1904.

1. That the Council of the Auckland University College undertakes to award the Grey Scholarship for the current year (1904) upon the conditions prescribed in the letter of the Secretary of Education dated 11th May, 1900.

2. That the Scholarship be of the value of £50.

3. That the Scholarship be kept distinct from all other Scholarships by having a Special Examination by the Professors concerned in all the subjects taken up by the Candidates.

4. That the subjects of Examination shall be chosen from the following :—

- | | |
|-----------------------------|-------------------------------|
| 1. Heat, Sound, and Light. | 6. Zoology. |
| 2. Electricity & Magnetism. | 7. Pure Mathematics. |
| 3. Astronomy. | 8. Mechanics and Hydrostatics |
| 4. Geology. | 9. Chemistry. |
| 5. Botany. | |

Of these a candidate may choose any three, but must take up one at least of subjects 1, 2, 3, 4.

5. That the Scholarship be open to all Students of this College who have not completed their third academical year on 1st October, 1904.

6. That the Scholarship be awarded upon an examination to be held at the end of the academic year 1904.

7. That the winner of the Scholarship must keep terms in this College during the Session of 1905 and pass the Annual Examination.

8. That the Scholarship be not tenable with any other scholarship or exhibition.

9. That the holder of the Scholarship shall be entitled to payment of one-third of the Scholarship at the end of the first and second terms, and at the end of the third term and the passing of the Annual Examination, on production of a certificate from the Professors under whom he or she shall have studied of diligent attendance, good conduct, and satisfactory progress in studies. Failing such certificate or an adverse report from the Professors, the Council may cancel the Scholarship, the money forfeited to be reserved for future Grey Scholarships.

10. That Candidates give notice to the Registrar on or before 1st October next of the subjects they propose to take up.

REGULATIONS RESPECTING SINCLAIR SCHOLARSHIP.

1901. 1. The Sinclair Scholarship to be competed for in the year ~~1901~~ is of the annual value of £70, and is tenable for three years. It is founded for the encouragement of the study of Biological Science.

2. This Scholarship is open to all persons, male or female, born in the Colony of New Zealand, who at the time of examination shall be between the ages of sixteen and twenty years, and who have not kept Terms or attended Lectures, or held a Scholarship in any University or College, and who shall satisfy the Council of the College that neither they nor their parents or guardians can obtain for them a University education without pecuniary aid. The holder of this Scholarship will not be allowed to hold concurrently a Junior University Scholarship.

3. Candidates, when giving notice of intention to compete, should forward (1) certificate of birth-place and age, and (2) a declaration to the following effect :—

I, A——— B———, do solemnly and sincerely declare, that neither I nor my parents or guardians can

afford the expense of a University education for me without pecuniary assistance, and that I desire to obtain such an education.

(Signed) A——— B———

Declared before me this day of 190
(To be signed by a J.P. or Clergyman.)

This certificate must be accompanied by a declaration from a Clergyman or Stipendiary Magistrate of the district in which the parents or guardians reside that to the best of his knowledge and belief the statement in the certificate is correct.

4. Candidates for the Sinclair Scholarship will be examined in Mathematics and in any two of the following subjects (a) Botany, (b) Animal Physiology, (c) Physical Geography, and will be required to write an English Essay on a subject selected by the Examiners.

The standard of the Examination will be the same as that for the Junior Scholarships of the University of New Zealand.

Special weight will be given to attainments and capacity in Animal Physiology and Botany.

5. The Examiners shall be entitled to certify to the Council that no sufficiently qualified candidate has appeared, whereupon the Council may decline to award the Scholarship.

6. The successful candidate will be required to keep Terms at the Auckland University College, and to carry on the studies for the encouragement of which the Scholarship was founded.

7. The holder of the Scholarship shall be entitled to payment of a proportionate amount of his Scholarship at the end of each collegiate Term, on production of a certificate from the Professors under whom he shall have studied, of diligent attendance, good conduct, and satisfactory progress in studies. Failing such certificate, or an adverse report from the Professors, the Council may cancel the Scholarship.

8. The Examination will be held at Auckland, Wellington, Christchurch, and Dunedin, about the end of October, and the names of candidates must be given in to the Registrar on or before the 1st day of that month.

GILLIES SCHOLARSHIP.

A Gillies Scholarship, of the annual value of £70, tenable for three years, will be offered for competition in ~~1905~~ 1906

RHODES SCHOLARSHIPS.

Under the will of the Right Hon. Cecil John Rhodes, certain Scholarships have been established at Oxford for students from the Colonies and the United States of America. These are of the yearly value of £300, and are tenable for 3 years. The number of Scholarships allotted to the Colonies is 60, and of these, 3 are allotted to New Zealand. Two Scholarships (or 100 in all) have been appropriated to each of the States and territories of the United States of North America. In New Zealand one Scholarship is to be filled up each year. In the election of a student to a Scholarship, regard shall be had (1) To his literary and scholastic attainments; (2) His fondness of and success in manly outdoor sports; (3) His qualities of manhood, truth, courage, devotion to duty, sympathy for the protection of the weak, kindness, unselfishness, and fellowship; and (4) His exhibition during school days of moral force of character, and of instincts to lead and to take an interest in his school-mates, for these latter attributes will be likely in after life to guide him to esteem the performance of public duties as his highest aim.

Regulations are to be issued by the Trustees nominated by Mr. Rhodes, viz., Earl of Rosebery, Earl Grey, Lord Milner, Mr. Alfred Beit, Dr. Leander, Starr Jameson, Mr. Lewis Loyd Mitchell, and Mr. Bouchier Francis Hawksley. So soon as circumstances permit, these regulations will be printed for the use of candidates in New Zealand. Meanwhile, all persons interested are invited to communicate with the Registrar of this College, who will furnish them with such information as may be in his possession.

SYLLABUS OF LECTURES.

LATIN (PROFESSOR H. A. TALBOT-TUBBS).

The following courses will be delivered during the session :—

Translation.—Lectures on the prescribed books :—Vergil, *Æneid XII.* ; Tacitus, *Agricola*, *Germania*. The courses will be given in this order.

Hours of Lecture—Monday and Thursday, 6—7 p.m.

Composition.—There will be two classes, Junior and Senior. The Junior Course will deal with the Syntax of the sentence, and will lead up to continuous prose through the rendering of English Idiom. It is intended for those who have not previously received a sufficient grounding in Syntax and Idiom. In the Senior Course, continuous prose will be so treated as to illustrate the several Latin styles, and the standard of difficulty will be that of the B.A. pass examination, but the lectures of the first term will be of a less advanced kind.

Hours of Lectures—Junior Course, Monday, 7—8 p.m. ; Senior, Thursday, 7—8 p.m.

“*Honours*” and M.A. Lectures, and the hours of their delivery, are subject to special arrangement. Intending Students are requested to call at an early date.

GREEK (PROFESSOR H. A. TALBOT-TUBBS).

The following courses will be delivered :—

Translation.—Lectures on the prescribed books : Herodotus, *Book VIII.* ; Æschylus, *Persæ*.

Hours of Lecture—Tuesday and Thursday, 11 a.m.—12 noon.

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SYLLABUS OF LECTURES.

Composition.—Lectures will be tutorial. Sidgwick's "Greek Prose Composition" will be used as a Text-book.

Hour of Lecture—Tuesday, 10—11 a.m.

"*Honours*" Lectures are subject to special arrangement. Intending students are requested to send in their names *as early as possible*.

ENGLISH LANGUAGE AND LITERATURE.

(PROFESSOR EGERTON.)

ENGLISH LITERATURE.

The following courses of Lectures will be delivered during the Session of 1904 :—

I.—The History of English Literature during the latter half of the 18th century.

The subject will be treated in the following order :—

(a) General Introduction to the Period.

(b) Origin and Early History of the English Novel.

The Sentimental Novel. Richardson and his Imitators.

Reaction against Sentiment. The Satirical Humourists: Fielding and Smollett. Realism in Fiction.

Combination of Humour with Sentiment: Sterne, Goldsmith, Miss Burney.

Romantic Prose Fiction.

Walpole's *Castle of Otranto*, Mrs. Radcliffe's *Mysteries of Udolpho*, Lewis's *Tales of Terror*

and *Wonder*, Beckford's *Vathek*.

SYLLABUS OF LECTURES.

(c) Development of Poetry.

The Pope couplet under Goldsmith and his successors. Evolution of the Ode. Gray and Collins.

The Mediæval Revival. Teutonic and Keltic Myths. Gray and Macpherson. Revival of Ballad Poetry. Scott's Early Work.

The "Return to Nature." Cowper's Task. Early Work of Wordsworth and Coleridge. Realism in Poetry. Crabbe.

The Revolution Spirit : Literary Influences of the French Revolution. Burns. William Blake. Relation of the Revolution to the Works of Wordsworth, Coleridge, and others.

(d) Prose Writers of the Revolution : Paine, Godwin, Priestley, Edmund Burke.

Essayists, Historians, &c. : Dr. Johnson, Gibbon, Hume, Robertson.

(e) History of the English Drama, 1750—1800.

Text-books recommended.—Morley's "First Sketch of English Literature," or Smith's "Students' Manual of English Literature." Further information as to texts, etc., will be given in lectures.

Hours of Lectures.—Wednesday, 3—4 p.m. and 7—8 p.m. The evening lecture is a repetition of that delivered in the afternoon.

II.—Courses of Lectures will be delivered on the following works :—

First Term : The Novels of Thackeray, with special reference to *Esmond*, which will be studied in detail. (Macmillan's edition of *Esmond* in the "English Classics" series will be used as a text-book.)

Second Term : Shakspeare's *Julius Cæsar* (Clarendon Press edition).

SYLLABUS OF LECTURES.

Third Term : Shakspeare's *Merchant of Venice* (Clarendon Press edition).

From time to time, students who desire to keep terms will be required to write essays upon subjects connected with the above works: instruction in English Composition will be given there-upon.

Hours of Lectures—Thursday, 12 noon—1 p.m.; Saturday, 9—10 a.m. The Saturday Lecture is a repetition of that delivered on Thursday.

ENGLISH LANGUAGE.

III.—The Origin, Structure, and History of the English Language.

Text-books.—*The Anglo-Saxon Primer* (Sweet). *Specimens of Early English*, Part II. (Morris and Skeat). *Historical Outlines of English Accidence* (Bradley and Kellner). Those who require a more elementary text-book of English Philology are recommended to procure Skeat's *Primer of English Etymology*, or Lowe's *English Language*.

Hours of Lectures—First Year, Tuesday, 6—7 p.m.; Second Year, Tuesday, 7—8 p.m.

HONOURS COURSE.

The course for Honours and M.A. usually requires at least two years' reading. Undergraduates who intend to read for Honours or Scholarships are recommended to communicate to the Professor as early as possible their intention of so doing.

Hours of Lectures (subject to alteration by arrangement)—Monday, 3—4 p.m.; Wednesday, 11 a.m.—12; Thursday, 3—5 p.m.

SYLLABUS OF LECTURES.

EARLY ENGLISH TEXT SOCIETY'S PRIZE.

The Early English Text Society has offered as a prize, open to those attending lectures at Auckland University College, three volumes of its publications. The books are valuable reprints of Early English Texts.

The examination papers will be set by the Professor of English Language and Literature on the following course:—Elements of Anglo-Saxon Grammar, Sweet's *Anglo-Saxon Reader*, Morris and Skeat's *Specimens of Early English* (Parts I. and II.)

PURE MATHEMATICS (PROFESSOR SEGAR).

ELEMENTARY.

ORDINARY COURSE.—There will be given three lectures a week on the Pure Mathematics prescribed for the degrees B.A. and B.Sc. by the University of New Zealand. Geometry, however, will not be dealt with in this course beyond what is necessary to deal with the Trigonometry.

Text-books.—C. Smith's "Elementary Algebra"; Loney's "Trigonometry" (Part I.)

Hours of Lectures.—Wednesday, 5—6 p.m.; Friday, 6—7 p.m.; Saturday, 10—11 a.m.

GEOMETRY.—An extra course of one lecture a week will be given on Geometry, Theoretical and Practical.

Text-book.—Barnard and Child's "New Geometry."

Hour of Lecture.—Saturday, 11—12 a.m.

SENIOR COURSE.—A senior course will be provided for such students only as the Professor may consider eligible.

TUTORIAL CLASSES.—Tutorial Classes will be arranged for those for whom help other than or additional to that given in the regular lectures may be necessary or advisable.

ANNUAL EXAMINATION.—In the Annual Examination for the keeping of terms, two papers will be set, one on Geometry and Trigonometry, and the other on Algebra. *Candidates for a Second*

SYLLABUS OF LECTURES.

or Third Year's Terms will be expected to reach a higher standard than candidates for a First Year's Terms. The papers will include some extra questions, answers to which will not be expected for a Pass, but will be taken into account in assigning the Classes and Order of Merit.

ADVANCED.

Lectures on the more advanced parts of Mathematics will be arranged according to requirements.

Students reading Mathematics for the degree of M.A. or for Honours, should generally take:—

First Year.—The Straight Line and Circle, treated Geometrically and Analytically; the Plane, treated Geometrically; Algebra; Trigonometry.

Second and Third Years.—The Conic Sections, treated Geometrically and Analytically; Differential and Integral Calculus, to Senior Scholarship Standard; the earlier parts of Solid Geometry, treated Analytically.

Fourth Year.—Differential and Integral Calculus; Solid Geometry, treated Analytically; Differential Equations.

APPLIED MATHEMATICS (PROFESSOR SEGAR).

ELEMENTARY.

ORDINARY COURSE.—There will be delivered two lectures a week on the elements of Applied Mathematics, as follows:—

First Term.—MECHANICS OF A PARTICLE.

Motion with uniform velocity and with uniform acceleration; Force and Motion; Momentum; Impact; Projectiles; Forces acting on a particle.

SYLLABUS OF LECTURES.

Second Term.—STATICS OF RIGID BODIES.

Forces acting on a solid body ; Centre of Gravity ;
Friction ; Elementary machines ; Weighing machines.

Third Term.—HYDROSTATICS.

Specific Gravity ; Pressure of liquids and gases ;
Floating bodies ; the Hydrometer, Barometer, Diving
Bell, Pump, Turbine, etc.

Text-books.—Briggs and Bryan's Dynamics, Tutorial Statics,
and Elementary Hydrostatics.

Hours of Lectures :—Wednesday and Friday, 8—9 p.m. (but
altered, when possible, to more convenient hours).

SENIOR COURSE.—A Senior Course will be provided, for
such students only as the Professor may consider eligible.

TUTORIAL CLASSES.—Tutorial Classes will be arranged for
those for whom help other than or additional to that given in the
regular lectures may be necessary or advisable.

ANNUAL EXAMINATION.—In the Annual Examination for the
keeping of terms, one paper will be set. *Candidates for a Second
or Third Year's Terms will be expected to reach a higher standard
than candidates for a First Year's Terms.* The papers will include
some extra questions, answers to which will not be expected for a
Pass, but will be taken into account in assigning the Classes and
Order of Merit.

ADVANCED.

Lectures on the more advanced parts of Applied Mathematics
and Mathematical Physics will be arranged according to require-
ments.

Students reading Mathematical Physics for the degree of
M.A. or for Honours, should generally take :—

First Year.—Statics, Dynamics, and Hydrostatics, to the
B.A. Standard.

SYLLABUS OF LECTURES.

Second and Third Years.—Statics, Dynamics, and Hydrostatics, more completely treated by elementary methods, and treated also analytically.

Fourth Year.—Geometrical Optics ; Spherical Astronomy.

CHEMISTRY (PROFESSOR BROWN).

GENERAL COURSE.

The characteristics of chemical action—The laws of chemical combination—The Atomic theory—Atomic weights and chemical symbols—Empirical, rational and constitutional formulæ—The physical and chemical properties and the modes of preparation of the more important elements and of their chief compounds including simple carbon compounds.

Hour of Lectures—Monday and Thursday, 5 p.m.

Text-book—"Inorganic Chemistry," by G. S. Newth.

ADVANCED COURSE.

A course of lectures on Chemistry of a more advanced character will also be given, and will deal more especially with theoretical chemistry. The subjects treated will include the determination of molecular and of atomic weights, the classification of the elements and the periodic law, and the relations between heat, light, and electricity, and chemical action.

Hour of Lecture—Monday, 4 p.m.

CHEMICAL LABORATORY.

The Laboratory will be open on Tuesdays and Fridays from 2 p.m. to 5 p.m., and from 6 p.m. to 9 p.m., and on Saturdays from 10 a.m. to 1 p.m.

SYLLABUS OF LECTURES.

Instruction will be given in the Laboratory in all branches of Practical Chemistry, including qualitative and quantitative inorganic and organic analysis, and the preparation of chemical products.

Special facilities will be afforded to those who desire to study Practical Chemistry, as applied to different processes employed in the arts and manufactures.

All apparatus, gas, fuel, and ordinary reagents will be provided by the College; but a deposit of 10s. will be required from each student, to cover the cost of loss and breakage.

EXPERIMENTAL PHYSICS (PROFESSOR BROWN).

SESSION 1904.

HEAT, LIGHT, AND SOUND.

FIRST TERM—HEAT.

Introductory—Methods of measurement employed in Physics—Thermometers and pyrometers—Expansion of solids, liquids, and gases—Absolute temperature—Application of the laws of expansion.

Phenomena of fusion, crystallisation, evaporation and ebullition.

Hygrometry—Modes of measuring the hygrometric condition of the atmosphere.

Conduction, radiation, and absorption of heat.

Calorimetry, specific and latent heats—The elements of Thermodynamics.

SECOND AND THIRD TERM—LIGHT AND SOUND.

Nature, production, and propagation of Light—The laws of reflection and refraction at plane and spherical surfaces—Prismatic

SYLLABUS OF LECTURES.

dispersion and spectra—Interference—Double refraction and plane polarisation—The principal optical instruments and vision.

Sensation and external cause of sound—Mode of its transmission—Velocity of sound—Elements of a musical sound—Loudness and extent of vibration—Pitch and rapidity of vibration—Motion of sounding strings—Motion of sounding air columns—Resonance—Analysis of compound sounds—Interference—Beats—Consonance and dissonance.

Hour of Lectures—Tuesday and Friday, at noon.

Note.—The course of instruction in Physics extends over two years; but the arrangement is such that students may begin the study of Physics in any year.

SESSION OF 1905

MAGNETISM AND ELECTRICITY.

FIRST TERM.

Introductory—Methods of measurement employed in Physics.

Magnetism—Magnetic attraction and repulsion—Magnetic induction—Measurement of magnetic forces—Terrestrial magnetism.

Frictional electricity—Fundamental experiments of attraction and repulsion—Phenomena of induction—Electrical machines—The Leyden Jar—Measurements of potential, capacity, and quantity. Electrometers. Atmospheric electricity.

SECOND AND THIRD TERMS.

Current electricity—Mutual action of magnets and currents—Galvanometers—Electrolysis—Thermal effects of the electric current—Resistance.

Production of electric currents The Voltaic cell—Thermoelectric currents—Induced currents—Magneto-electric and dynamo electric machines.

SYLLABUS OF LECTURES.

Application of electricity to lighting and signalling.

Hour of Lectures—Tuesday and Friday, at noon.

Text-books — “Electricity, treated Experimentally,” by Linnæus Cumming; “Elementary Lessons in Electricity and Magnetism,” by Sylvanus P. Thompson.

PHYSICAL LABORATORY.

Practical instruction in Physics will be given in the Laboratory, which will be open on Tuesdays and Fridays from 2 p.m. to 5 p.m., and from 6 p.m. to 9 p.m., and on Saturdays from 10 a.m. to 1 p.m.

BIOLOGY (PROFESSOR THOMAS).

1. GENERAL BIOLOGY.

Students who take either Botany or Zoology for the B.A. or B.Sc. degree of the New Zealand University, are required to show a knowledge of the elements of General Biology, that is, of the general phenomena of life. The present course of lectures is intended to cover the ground of the paper in General Biology, and will include the following subjects:—

Structure, physiology, and life-history of a small number of typical organisms, so selected as to illustrate the general principles of Biology—Theory of Evolution—Geographical Distribution of living beings—The Geological Record.

Hour of Lecture—Wednesday, 6 p.m.

Text-books—Parker, *Elementary Biology*; Marshall, *The Frog*.

SYLLABUS OF LECTURES.

2. BOTANY.

Students who take Botany for the B.A. degree should attend the three courses—(a) General Biology, (b) Junior Botany, (c) Senior Botany. The three courses may be taken in one year, but any student who can devote two years to the subject should defer attendance at the Senior Botany until the second year.

JUNIOR COURSE.

The form and structure of flowering plants—Fertilisation of flowers—Dispersion of seeds—The more important orders of native and introduced flowering plants.

Hour of Lecture—Tuesday, 7 p.m.

SENIOR COURSE.

The principal characters of the classes of plants—The structure, physiology, and life-history of the prescribed types of plants for the Bachelor of Arts degree.

Hour of Lecture—Monday, 7 p.m.

Text-books—Either Strasburger's *Text-book of Botany*, or Vines' *Elementary Text-book of Botany*. Students taking the Senior Course will require also Scott, *Structural Botany*; Bower, *Practical Botany for Beginners*.

HONOURS COURSE.

Special arrangements will be made for students reading Botany for Honours.

BOTANICAL EXCURSIONS.

Arrangements will be made for Botanical Excursions during the year.

3. ZOOLOGY.

The principal characters of the chief classes of animals—The structure and life-history of examples of the most important groups of animals—The elements of comparative embryology.

SYLLABUS OF LECTURES.

Hour of Lecture—Wednesday, 12 noon.

Text-books—J. A. Thomson, *Outlines of Zoology*; Marshall and Hurst, *Practical Zoology*.

BIOLOGICAL LABORATORY.

The Laboratory will be open during the following hours:—Monday, 2 p.m. to 5 p.m.; Wednesday and Friday, 6 p.m. to 9 p.m.; Saturday, 10 a.m. to 1 p.m.

Classes will be formed for the practical work in Botany or Zoology required for the Bachelor of Arts or Bachelor of Science degree, or for the Medical Intermediate Examination.

Facilities will be offered to persons not preparing for examinations, but who desire to learn the use of the microscope and methods of studying plants and animals.

NOTE.—Special aid will be given to those who desire to learn the use of the microscope and the applications of biology in the arts and manufactures.

GEOLOGY (PROFESSOR THOMAS).

The ordinary course of instruction for students who take Geology for the B.A. or B.Sc. degree, is completed in one year, and includes two lectures weekly and attendance at the Laboratory twice a week. Those, however, who desire to do so, may spread the practical work over two years, attending once a week.

LECTURES.

Crust of the earth—Rocks and minerals—The geological action of the air, water, ice, and living organisms—Volcanoes and volcanic action—Earthquakes—Metamorphism—Secular movements of the crust.

SYLLABUS OF LECTURES.

Architecture of the earth's crust.

Palæontology—Fossils and their uses—General structure of the classes of plants and animals found in the fossil state—Generalisations of Palæontology and their bearing on the theory of Evolution.

Chronological classification of rocks—Geological eras and periods—Geology of New Zealand—The characteristic features of the Geological periods.

Hour of Lectures—Tuesday and Friday, 5 p.m.

Text-books—Geikie's *Class-book of Geology*, or Geikie's *Text-book of Geology*; Wood's *Elementary Palæontology*.

GEOLOGICAL LABORATORY.

The Laboratory will be open during the following hours:—Monday, 2 p.m. to 5 p.m.; Wednesday and Friday, 6 p.m. to 9 p.m.; Saturday, 10 a.m. to 1 p.m.

Practical instruction will be given in the following subjects:—The properties and identification of minerals—Rock-forming minerals—Characters of rocks—Structure of typical genera of fossil plants and animals—Characteristic fossils of the geological periods.

Excursions will be arranged for the study of Field Geology.

MINING.

Special facilities will be afforded to those who wish to study the ores of the metals, identification of minerals, rocks, etc., for the purpose of Mining.

SYLLABUS OF LECTURES.

FRENCH (MAXWELL WALKER, M.A.)

The following courses will be delivered during the session of 1904 :—

I.—TRANSLATION :—

(a) Lectures on the following prescribed works—

Corneille—*Cinna* and *Horace*.

Molière—*Le Misanthrope*.

Voltaire—*Charles XII*.

Hour of Lecture.—Saturday, 12 noon—1 p.m.

(b) Sight Translation.—Lectures will be given fortnightly, alternating with lectures on period of literature.

Hour of Lecture.—Thursday, 4—5 p.m.

This lecture will be repeated if required by a sufficient number.

II.—COMPOSITION :—

(a) *Junior*.—Intended for students who have not had sufficient practice in continuous French prose.

Hour of Lecture.—Saturday, 11 a.m.—12 noon.

(b) *Senior*.—In this class passages are set each week, the standard of difficulty rising gradually until, in the second term, it reaches that of the B.A. Pass Examination.

Hour of Lecture.—Wednesday, 4—5 p.m.

To be repeated if required by a sufficient number.

III.—THE HISTORY OF FRENCH LITERATURE between the years 1701 and 1800. These lectures alternate with the lectures on sight translation

Text-books recommended.—Kastner and Atkins' "Short History of French Literature," and Philip Yorke's "Note-book of French Literature."

Hour of Lecture.—Thursday, 4—5 p.m.

To be repeated if required.

SYLLABUS OF LECTURES.

HONOURS COURSE.

"Honours" and Scholarship Lectures are subject to special arrangement. At present the hours of lecture are Tuesday, 3—4 p.m. and 4—5 p.m., and Friday, 4—5 p.m.

GERMAN (MAXWELL WALKER, M.A.)

The following courses will be delivered during the session :—

I.—TRANSLATION.—Lectures on the following prescribed works :—

Goethe—*Aus meinem Leben* (Part I.)
Hermann und Dorothea.

Schiller—*Maria Stuart*.

II.—COMPOSITION.—Passages graded up to the standard of the B.A. Examination are set week by week.

III.—THE HISTORY OF GERMAN LITERATURE.

The lectures in German are subject to special arrangement, the hours at present on the time-table being—for the Junior Class, Wednesday and Saturday, 9—10 a.m., and for the Senior Class, Wednesday and Saturday, 10—11 a.m. These hours are generally altered.

"Honours" Lectures are also the subject of special arrangement.

JURISPRUDENCE AND CONSTITUTIONAL HISTORY

(DR. BAMFORD).

The course will embrace the following subjects :—

(a) JURISPRUDENCE :—

Text-books.—T. E. Holland's "Jurisprudence," Hunter's "Introduction to Roman Law."

SYLLABUS OF LECTURES.

To be consulted.—Austin's "Jurisprudence" (students' edition), Maine's "Ancient Law."

Hour of Lecture—Monday, 8—9 p.m.

(b) CONSTITUTIONAL HISTORY:—

Text-books.—Feilden's "Short History of the Constitution," Thomas' "Leading Cases in Constitutional Law."

To be consulted.—Taswell-Langmead's "Constitutional History."

Hour of Lecture—Thursday, 8—9 p.m.

(Hours of Lectures are subject to alteration.)

LAW (DR. BAMFORD).

The course will embrace the following subjects:—

(a) CONTRACTS:—

Text-book.—Anson's "Law of Contracts."

Hour of Lecture.—Monday, 5—6 p.m.

(b) EQUITY:—

Text-books.—Snell's "Equity" and Blyth's "Analysis of Snell's Equity."

Hour of Lecture.—Friday, 6—7 p.m.

The standard will be that required for the final LL.B. and Solicitors' Professional Examination.

(Hours of Lectures are subject to alteration.)

MUSIC (DR. W. E. THOMAS).

*JUNIOR DIVISION.

Hours of Lectures—Monday, 4—5 p.m. and 6—7 p.m.†

Elements of Music: Notes, rests, clefs, intervals, scales, time abbreviations, and other signs.

* This Division will cover the knowledge necessary for Trinity College, London, Senior; the Associated Board of R.A.M. and R.C.M., Senior; and Matriculation.

† The evening Lecture is a repetition of that delivered in the afternoon.

SYLLABUS OF LECTURES.

Harmony⁽¹⁾ : Common chords, chords of the dominant 7th, 9th, 11th, 13th, suspensions, augmented 6th, cadences, passing notes, sequences, transposition, modulation, and harmonising melodies.

Counterpoint⁽²⁾ : Simple ; all species in two parts.

History of Music.⁽³⁾

INTERMEDIATE DIVISION.

Hours of Lectures—Thursday, 3—4 p.m. and 7—8 p.m.*

Harmony⁽¹⁾ : Up to four parts.

Counterpoint⁽²⁾ : Simple, up to three parts.

Double Counterpoint : In the octave, 10th, 12th, and 15th.

Canon and Fugue : In two parts.

Instrumentation : Compass, capabilities, and quality of the various instruments employed in the orchestra.

Form : as employed in classical compositions.

History of Music.⁽³⁾

ADVANCED DIVISION.

Hours of Lectures—Friday, 4—5 p.m. and 6—7 p.m.*

For Advanced Students: The lectures will comprise the whole of the Theory and History of Music, up to the standard of the Bachelor of Music Degree.

The above-mentioned lectures will be delivered at the University College.

*The evening Lecture is a repetition of that delivered in the afternoon.

- (1) Stainer's "Harmony" is recommended for Juniors, and Prout's for Intermediate and Advanced.
- (2) Bridge's "Counterpoint" for Juniors, Prout's for Intermediate and Advanced.
- (3) Davey's "History of Music" is recommended for all Divisions.

SCHOOL OF MUSIC.

Syllabus of Requirements for Practical and Theoretical Examinations, and for Diplomas conferred by the University College, Auckland.

1903 to 1904.

[This Syllabus will remain in force until December, 1904.]

The objects that the School of Music has in view are the following:—

- (1) The Cultivation of the Study, Execution and Composition of Music in all its branches.
 - (2) To provide a thorough system of Education in all musical matters by lectures and tuition.
 - (3) To grant certificates of merit and diplomas to those persons who have passed the examinations.
 - (4) To thoroughly equip those persons who are desirous of becoming qualified teachers and performers of music.
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PRACTICAL AND THEORETICAL EXAMINATIONS.

- (1) These examinations will be held at the University College in May and November, and are open to all persons without restrictions as to age. The Registrar of the College will supply full particulars, receive names and fees, and give dates of examinations.
- (2) Certificates will be given to successful candidates on the report of the Examiners.
- (3) Candidates must send in their names, together with fees, to the Registrar, at least fourteen days before the date of examination. They may enter for any grade without restriction, excepting the Associate and Fellowship of Music (v. regulations for Diplomas). Candidates may enter again for Honours in any grade.

(4) A card giving particulars of date and time of examination will be sent to each candidate. This card must be produced at the examination, and will be returned to the candidate with the number of marks obtained in each subject inserted. For a pass certificate 65 marks will be required. For Honours 85.

(5) Candidates who fail to put in an appearance at the examination will forfeit their fees; where a satisfactory reason is given for absence, they may present themselves for the next examination on payment of half fees.

(6) The subjects of examination, and for which certificates are separately granted, are as follows:—Theory of Music; Pianoforte Playing; Solo Singing; Class Singing; Orchestral Instruments; Organ Playing; Violin Playing.

(7) There are six grades of examinations:—Primary, Junior, Intermediate, Senior, Associate of Music, and Fellowship of Music.

(8) There will be two Examiners in all Practical Subjects.

THEORY OF MUSIC.

Maximum, 100; Honours, 85; Pass, 65.

*Requirements—

P.J.I.S. Notation.

Time.

Clefs.

Scales (major).

Musical terms (relating to tone and speed).

P. Accidentals.

*Primary, P. to P.; Junior, J. to J.; Intermediate, I. to I.; Senior, S. to S.

Minor and Chromatic Scales.

Key Signatures.

Transposition.

J. Rests.

Staccato and Legato Marks.

Syncopation.

Intervals.

Alto and Tenor Clefs.

Signs in general use.

I. Figured Bass or Common Chords and Inversions.

Harmonising figured Bass up to dominant 7th.

Vocal Score.

All C Clefs.

S. Counterpoint in all species in two parts.

Specimen papers can be obtained at the Registrar's Office.

FEES—Primary, 5s.; Junior, 6s.; Intermediate, 7s. 6d.; Senior, 10s.

PRACTICAL EXAMINATIONS.

Syllabus of Requirements.

Pianoforte Playing.

Maximum, 100; Honours, 85; Pass, 65.

Primary. (Fee, 10s. 6d.)

(a) Scales of C, G, D, A, F, B flat, and E flat. Two octaves; one hand at a time, or both hands together.

- (b) Studies Nos. 8 to 13, from Czerny's 101 Exercises.
- (c) Sonatina in F—Beethoven.

Junior. (Fee, 12s. 6d.)

- (a) All Major Scales; Two octaves in similar and contrary motion.
- (b) Studies Nos. 4 and 10, Bk. I. Op. 100—Bertini.
- (c) Sonatina No. 3. Op. 36—Clementi.
- (d) Gavotte in G minor and Musette in G ma., III. Eng. Suite—Bach.

Intermediate. (Fee, 15s.)

- (a) Major and minor scales in similar and contrary motion; harmonic form only in contrary motion.
- (b) Arpeggios of major and minor chords in the first position.
- (c) Sight reading.
- (d) Studies Nos. 13 to 15, "Etude de la Vélocité" —Czerny.
- (e) Sonata in G mi. Op. 49—Beethoven.
- (f) No. 1 of Bach's Inventions in two parts.

Senior. (Fee, £1 1s.)

- (a) Scales, major and minor, in octaves, 3rds, 6ths, and 10ths, in similar and contrary motion.
- (b) Arpeggios of major and minor common chords, dominant 7ths and diminished 7ths in all positions.
- (c) Sight reading.
- (d) Studies Nos. 26 and 30. Bk. II., "Etude de la Vélocité" —Czerny.
- (e) Andante and Rondo Capriccioso—Mendelssohn.
- (f) Fugue in C minor. No. II. of the 48—Bach.

Students of the College wishing to enter for any of the above practical examinations will be admitted as candidates on payment of half-fees.

Solo Singing.

Primary. (Fee, 10s. 6d.)

- (a) Major scales to "Ah."
- (b) Any one of the Studies of Concone.
- (c) A simple song selected by the candidate.
- (d) Ear tests

Junior. (Fee, 12s. 6d.)

- (a) Major and minor scales to "Ah."
- (b) Intervals of 3rds, 4ths (perf.), 5ths (perf.), and octave.
- (c) One study from Concone.
- (d) A simple song selected by the candidate.
- (e) Ear tests.
- (f) An easy piece from sight.

Intermediate. (Fee, 15s.)

- (a) Major and minor scales (harmonic minor).
- (b) Two studies from Concone.
- (c) All intervals within the octave (except diminished and augmented).
- (d) Sight reading.
- (e) Ear tests.
- (f) One song selected from an Oratorio by the candidate.

Senior. (Fee, £1 1s.)

- (a) Major and minor scales (harmonic and melodic minor).
- (b) Two studies from Concone.
- (c) Diatonic and chromatic intervals.
- (d) Sight reading.

- (e) One song, selected by the candidate from an Oratorio, and one song from the list below—

Soprano—"On mighty pens," from "Creation"—Haydn.

Mezzo-Soprano—"What though I trace"—Handel.

Alto—"He was despised," from "Messiah"—Handel.

Tenor—"Thou shalt break them," from "Messiah"—Handel.

Baritone—"It is enough," from "Elijah"—Mendelssohn.

Bass—"The wanderer"—Schubert.

[Candidates must bring their own accompanists.]

N.B.—Students of the College wishing to enter for any of the above examinations in singing, will be admitted as candidates on payment of half-fees.

Class Singing.

Fees: A class numbering 10 or less, £1 1s.; a class numbering 11 or more, £1 11s. 6d.

[There are three standards, A, B, C, of which A is the highest. A requires 85 marks. B, 75. C, 65.]

Requirements—

- (a) Major and minor scales.
- (b) Diatonic intervals.
- (c) A song of the conductor's choice.
- (d) Any two of Mendelssohn's two-part songs.

ORCHESTRAL INSTRUMENTS.

Fees, similar to the other practical sections.

Candidates must submit for the approval of the Director of Examinations one study, and two selected pieces by some classical composer.

Reading from sight will be expected of all grades except the Primary.

Students of the College will be accepted as candidates at half-fees.

Organ Playing.

Junior. (Fee, 12s. 6d.)

- (a) Major and harmonic minor scales to the extent of two octaves (either hand may be required or both hands together).
- (b) Major scales to the extent of one octave on the pedals.
- (c) Two preludes from Rink's Organ School, Vol. I.
- (d) Prelude and Fugue in C major. No. I. of short Preludes and Fugues.
- (e) Sight reading.

Intermediate. (Fee, 15s.)

- (a) All major and minor harmonic scales in similar and contrary motion.
- (b) Major and minor harmonic scales (one octave on the pedals.)
- (c) Nos. 8 or 10 from Twelve Short and Easy Pieces—Smart.
- (d) No. 2 (D mi.) Prelude and Fugue—Bach.
- (e) Sight reading.

Senior. (Fee, £1 1s.)

- (a) All major and minor scales in 3rds, 6ths, and 8ths, and chromatic scales throughout the keyboard.
- (b) Major, minor, and chromatic scales throughout the pedal-board.
- (c) Major scales, pedal and left-hand in contrary motion to the extent of two octaves, when possible.
- (d) Rink's Organ School, Part IV. (any one).
- (e) Mendelssohn's 3rd Organ Sonata. (Novello).
- (f) Sight reading.

N.B.—Half-fees to students of the College.

Violin Playing.

Primary. (Fee, 10s. 6d.)

- (a) Major scales of C, G, D, and F, in the first position.
- (b) Six Divertissements, Book I. Op. 106 (any one)—Dancla.
- (c) Nos. 7 and 9, from Thirty Melodies—Berthold Tours

Junior. (Fee, 12s. 6d.)

- (a) Major scales of A, E, B, and B flat, in the first position.
- (b) Sight reading.
- (c) Study No. 2, Bk. II, in F major—Kayser.
- (d) Bourrée in G—Handel.

Intermediate. (Fee, 15s.)

- (a) All major and minor scales not beyond the 5th position, ascending and descending (two octaves).
- (b) Major and minor common chord arpeggios (not beyond the 5th position).
- (c) Sight reading.
- (d) "Allegro vivace in C," 1st Movement of Sonata for Piano and Violin—Mozart.
- (e) "Canzonetta in G"—Paradies.
- (f) No. 37 of Spohr's Grand Violin School.

Senior. (Fee, £1 1s.)

- (a) The major and minor scales (three octaves) of E, A flat, A, B flat, B; all other scales two octaves only.
- (b) Major and minor common chords and inversions, and the chord of dominant 7th (root position).
- (c) Sight reading.
- (d) Nos. 46 and 47 of Spohr's Grand Violin School.
- (e) Romance. Op. 26—Svensden.
- (f) Romance in F—Beethoven.

[Candidates must bring their own accompanists.]

DIPLOMAS.

Associate of the School of Music.

1. Candidates for this Certificate must attend a course of Lectures in Acoustics, and pass an examination in the same.

2. They must also give two years' attendance on lectures in the School of Music, embracing the Theory of Music, Harmony, Composition, Form, Counterpoint, Fugue, History of Music, and Instrumentation; and must also display the required proficiency in the execution of either vocal or instrumental music of standard examples of classical and modern composition; or, if the Associate of Music is taken in the Theory of Music, must write an exercise and pass the Examination as laid down in the Syllabus.

3. Notwithstanding the fulfilment of all other requirements, no person shall be entitled to receive the diploma of "Associate" until he or she shall have attained the full age of 17 years.

Practical Examination for Associate of Music. (Fee, £1 11s. 6d.)

PIANOFORTE PLAYING.

Required:—

- (a) Prelude and Fugue in E minor. Op. 35—Mendelssohn.
- (b) Sonata in B flat. No. 11, Op. 22—Beethoven.
- (c) Sight reading.
- (d) All major and minor scales and arpeggios in similar and contrary motion.
- (e) A critical knowledge of the pieces performed.

ORGAN PLAYING.

(Fee, £1 11s. 6d.)

Required:—

- (a) Bach's "S. Anne" Fugue.
- (b) Sonata I.—Mendelssohn.

- (c) Sight reading.
- (d) Reading from Figured Bass.
- (e) A critical knowledge of pieces performed.

SOLO SINGING.

(Fee, £1 11s. 6d.)

Soprano—(a) "O let eternal honours" and "From mighty kings"—Handel.

(b) "With verdure clad" (Creation)—Haydn.

(c) Sight reading.

(d) Any major or minor scale.

(e) A critical knowledge of the pieces performed.

Mezzo-Soprano—(a) "She wandered down the mountain-side"—Clay.

(b) "Rose softly blooming"—Spohr.

(c), (d), (e) as Soprano.

Contralto—(a) "O thou that tellest"—Handel.

(b) "O that we two were maying" (in C)—Gounod.

(c), (d), (e) as Soprano.

Tenor—(a) "The enemy said"—Handel.

(b) "I'll sing three songs of Araby"—Clay.

(c), (d), (e) as Soprano.

Bass—(a) "Why do the nations" Handel.

(b) "'Tis jolly to hunt"—S. Bennett.

(c), (d), (e) as Soprano.

ORCHESTRAL INSTRUMENTS.

(Fee, £1 11s. 6d.)

Two classical pieces by different composers must be submitted to the Examiners; the other tests will be the same as under Pianoforte Playing.

VIOLIN PLAYING.

(Fee, £1 11s. 6d.)

Required:—

- (a) Studies 7 and 8 (Augener)—Rode.
- (b) Tarantelle from Op. 85, No. 6 (Augener)—Raff.
- (c), (d), (e) as Pianoforte.

THEORETICAL EXAMINATION FOR ASSOCIATE.

Candidates must attend two years at the University College lectures in School of Music, and have passed the Annual Examinations.

An Examination Paper will be set in the following subjects:—

- (a) Harmony in 4 parts of an advanced nature.
- (b) Counterpoint in 4 parts.
- (c) Double Counterpoint in the 8th and 15th.
- (d) Canon in two and three parts.
- (e) Fugue in two and three parts.
- (f) Instrumentation.
- (g) Form.
- (h) History of Music.

An Exercise for 4 voices and string accompaniment, in modern anthem form, must then be submitted to the Professor of Music, with a declaration stating that the composition is the unaided work of the candidate.

N.B.—All exercises must be sent to the Registrar to be placed in the College Library, if accepted by the Examiners.

Fellow of the School of Music.

Candidates must have passed the Examination for Associate of Music, and in addition must have attended a year's lectures in music at the University College, and have passed the Advanced Annual Examination.

Theoretical Examination for Fellowship. (Fee, £2 2s.)

Requirements:—

- (a) Harmony in 5 parts of an advanced nature.
- (b) Strict Counterpoint in 5 parts.
- (c) Double Counterpoint in the 8th, 10th, 12th, and 15th.
- (d) Canon in 2, 3, and 4 parts.
- (e) Fugue in 4 parts.
- (f) Instrumentation.
- (g) Form.
- (h) History of Music.

An Exercise for 4 or 5 voices, with string accompaniment, containing contrapuntal writing, in at least two movements, must be sent in to the Professor of Music, with a declaration stating the composition is the unaided work of the candidate.

N.B.—All Exercises must be sent to the Registrar to be placed in the College Library, if accepted by the Examiners.

Fellowship.—(Practical.)

(Fee, £2 2s.)

PIANOFORTE PLAYING.

Requirements:—

- (a) Bach's E flat minor Prelude and Fugue. No. 8, Bk. I.
- (b) Beethoven's Sonata in D minor. Op. 31. No. 2.
- (c) Sight reading.
- (d) All major and minor scales in 3rds, 6ths, 10ths, and double 3rds and 6ths; chromatic scales in all conceivable ways; all arpeggios in similar and contrary motion.
- (e) A critical knowledge of the pieces performed.

N.B.—An artistic rendering of the pieces performed is essential.

Fellowship.—(Practical.)

(Fee, £2 2s.)

ORGAN PLAYING.

Requirements :—

- (a) Playing from figured bass at sight.
- (b) Extemporisation.
- (c) Questions on stops.
- (d) Bach's G minor Fugue.
- (e) Sonata No. I.—Guilmant.
- (f) A critical knowledge of the pieces performed.

Fellowship.—(Practical.)

(Fee, £2 2s.)

SOLO SINGING.

- (a) Sight singing of an advanced nature.
- (b) Scales, diatonic and chromatic.
- (c) Two studies of an advanced nature, chosen by the candidate.
- (d) One solo selected by the candidate.
- (e) One solo selected from list below :—
 Soprano—"Rejoice greatly"—Handel's "Messiah."
 Alto—"O thou afflicted!"—Benedict's "S. Peter."
 Tenor—"On, away! awake!"—Coleridge-Taylor's "Hiawatha."
 Bass—"But who may abide"—Handel's "Messiah."
 (Candidates must bring their own accompanists.)

VIOLIN PLAYING.

(Fee, £2 2s.)

Required :—

- (a) Concerto No. II.—Spohr.
- (b) Kreutzer sonata—Beethoven.
- (c), (d), (e), as under Pianoforte Playing.

In issuing the Syllabus of Practical and Theoretical Examinations, it is hoped that a want, often expressed, has been supplied.

The following points must be noted with reference to the conduct of the Examinations to be held at the University College :—

(1) Two EXAMINERS will be present at all Practical Examinations.

(2) Ample time will be given to each candidate for performance.

(3) The WHOLE of the work prepared will be expected to be played.

(4) All candidates, in whatsoever grade they may select, will have the same works to prepare

EXAMINATION FEES.

Practical Subjects :—					£	s.	d.
Primary	...	...	...	...	...	0	10 6
Junior	...	...	...	...	...	0	12 6
Intermediate	...	...	...	...	...	0	15 0
Senior	...	...	...	...	...	1	1 0
Associate of School of Music...	...	...	...	...	...	1	11 6
Fellow	„	„	...	...	...	2	2 0

Theory :—

Primary	...	...	...	...	...	0	5 0
Junior	...	...	...	...	...	0	6 0
Intermediate	...	...	...	...	...	0	7 6
Senior	...	...	...	...	...	0	10 0
Associate of School of Music..	...	...	...	...	...	1	11 6
Fellow	„	„	...	...	...	2	2 0

GRADUATES.

The following are the Graduates of the University of New Zealand, whose names are on the College Register:—

DOCTOR OF SCIENCE.

MACLAURIN, James Scott (B.Sc. 1892), 1897 (1)

DOCTOR OF LAWS.

BAMFORD, Harry Dean (B.A. 1899, LL.B. 1901), 1903

MASTERS OF ARTS.

ALLEN, Richard William (B.A. 1898), 1899

ARDERN, Philip Sydney (B.A. 1902), 1903

BUCHANAN, Edith Mary [*née* Adams] (B.A. 1889), 1890

CARTER, Frederick John (B.A. 1890), 1891

CLARKE, Edward de Courcy (B.A. 1901), 1902

COWX, Howard Percival (B.A. 1890), 1891

CRUMP, Arthur Rainsforth (B.A. 1902), 1903

CRUMP, Mabel Lilian (B.A. 1896), 1897

CURRIE, Annie Hamilton (B.A. 1892), 1893

DAVIS, John King (B.A. 1881), 1882

FIELD, Edward Thurlow (B.A. 1892, LL.B. 1895), 1893

FRENCH, James Morison (B.A. 1887), 1888

GIFFORD, Arthur (B.A. 1885), 1886

GIFFORD, Sylvia Esther, (B.A. 1890), 1891

GILLIES, Sinclair (B.A. 1888), 1889

GRANT, Catherine Donaldson (B.A. 1892), 1893

GREEN, Thomas Hillier (B.A. 1889), 1890

HALLIWELL, Luther Vincent (B.A. 1902), 1903

(1) Government Analyst.

GRADUATES.

- HAMILTON**, Robert James (B.A. 1895), 1896
HARRIS, Thomas Abraham (B.A. 1900), 1901
HUNTER, Matthew Albert (B.Sc. 1900), (Honours 1901),
 1902
JACKSON, David Hamilton (B.A. 1891, B.Sc. 1893), 1892
LA TROBE, William Sanderson (B.A. 1893), 1894
LIPPIATT, George (B.A. 1890), 1891
LUSK, Harold Butler (B.A. 1901), 1902
MACLAURIN, Richard Cockburn (B.A. 1891), 1901 (2)
MAJOR, Charles Thomas (B.A. 1892, B.Sc. 1894), 1893
MAJOR, Henry Dewsbury Alves (B.A. 1895), 1896
MELLSOP, Clementine Emily Margaret [*née Harrison*]
 (B.A. 1884), 1885
MORRISON, Annie Christina (B.A. 1892), 1893
MULGAN, Edward Ker (B.A. 1895), 1896 (3)
MCCULLOUGH, Robert Alexander (B.A. 1895), 1900.
McINTOSH, Ethel May (B.A. 1902), 1903
McINTYRE, Hugh (B.A. 1901), 1902
NEVE, Frederick (B.A. 1892), 1902
NEWCOMBE, Frederick (B.A. 1894), 1895
NOTT, James Thornton (B.A. 1890), 1891
PARKINSON, Henry Ainslie (B.A. 1900), 1901
PATTERSON, Florence Isabella (B.A. 1901) 1903
PICKEN, Winifred (B.A. 1894), 1895
PICKMERE, Marguerita Blomfield, (B.A. 1901), 1902
POGSON, Frank Lubecki (B.A. 1900), 1901
ROCKEL, Robert Hermann (B.A. 1898), 1901
RYBURN, Robert Middleton (B.A. 1888), 1889
SHREWSBURY, Elsie (B.A. 1892), 1893

(2) Professor of Mathematics, Victoria College, New Zealand.

(3) Inspector of Schools, Board of Education, Auckland.

GRADUATES.

SHREWSBURY, Hugh (B.A. 1889, LL.B. 1894), 1890
 SHROFF, Alfred Homy (B.A. 1897), 1899
 SINCLAIR, Mary Muir (B.A. 1889), 1890
 SINCLAIRE, Frederick (B.A. 1902) 1903
 STRONG, Edward Herbert (B.A. 1899), 1900
 STUCKEY, Frederick (B.A. 1901), 1902
 TISDALL, Charles Archibald (B.A. 1894), 1895
 TISDALL, William St. Clair Towers (B.A. 1878), 1879
 TURNER, Joseph Hurst (B.A. 1889), 1890
 WALKER, Maxwell (B.A. 1901), 1902
 WATTS, Percy Harold (B.A. 1898), 1899
 WILSON, Joseph Harris (B.A. 1883), 1886
 WILSON, Ebenezer (B.A. 1902) 1903

BACHELORS OF ARTS.

AUBIN, Emile Dupont, 1891
 BAKER, Harold Napier, 1900
 BAKER, MARY LILIAN (*née* Hill), 1889
 BALL, Eleanor Dorothy (*née* Dudley), 1894
 BOSCAWEN, Teresa Catherine Burgoyne (*née* Gerkens),
 1897
 BOYLE, John, 1893
 BROAD, Charles Harrington, 1893
 BROWN, George, 1902
 BUTTON, Lela Cowell, 1903
 CARTER, Henry James, 1894
 CAUGHLEY, John, 1903
 CLAYTON, Charles Ziegler, (LL.B. 1886), 1883
 COLEMAN, Margaret Annabella, 1887
 CRONIN, Bartholomew, 1884
 DINNEEN, Alice Maud Dalton, 1901

GRADUATES.

DREW, Gertrude Annie, 1902
DRUMMOND, James, 1894
DRUMMOND, Peter, 1896
ECCLESFIELD, Isabel, 1891
ELLIS, Percy Sylvester Gilbert, 1893
FIELD, Charles William, 1899
FOX, Charles Elliot, 1900
GALWEY, John de Burgh, 1893
GATENBY, William Joshua, 1897
GRANT, Jane Donaldson, 1893
HAMILTON, Annie Eliza (*née* McPherson), 1899
HETHERINGTON, Jessie Isabel, 1902
HILL (*née* Durrieu), Louisa, 1889
HINE, Hubert, 1898
HORTON, Henry, 1892
HULL, Cecil Lina Francis, 1903
JAMES, Herbert Louis, 1886
KEER, Walter, 1886
KNAPP, Jessie, 1891
LAWS, Charles Henry, 1898
LINDSAY, Peter Alexander (M.B. and C.M., Edinburgh),
1884
LIVESEY, Cecil Edleston, 1897
LIVESEY, Florence Ellen, 1899
LONG, Frank Clendon, 1902
LLOYD, Claire Scott (*née* Smith), 1898
MAHON, Harold James del Monte, 1895
MOORE, Joseph Harold (LL.B. 1897), 1893
MURRAY, Annie, 1893
MURRAY, Donald, 1890
McDOWELL, William Chisholm Wilson, 1885

GRADUATES.

MCFARLAND, EDGAR JAMES, 1892
 MCSPORRAN, Robert, 1902
 O'DONOGHUE, D., 1900
 RATTRAY, Robert Henry (LL.B. 1880), 1878
 SEVERNE, Edward Herbert, 1902
 SMITH, Harry, 1897
 STEVEN, Martha, 1903
 THOMAS, Thomas Theodore, 1903
 WALKER, William Robert Cooper, 1898
 WATSON, Cecil Alexander Burns, 1903
 WELLS, Tom Umfrey, 1894 (4)
 WHYTE, Bessie Blair, 1903
 WILSON, Helen (*née* Simpson), 1902
 WITHER, George Bigg, 1895
 YOUNG, Frederick William, 1897

BACHELORS OF SCIENCE.

BAKER, William Henry, 1899
 CHOYCE, Charles Coley, 1897
 DONOVAN, Willie, 1903
 DROMGOOL, James Charles, 1899
 GRIFFIN, Cyril James Anthony, 1903
 HUNTER, Matthew Albert (1900), Honours 1901,
 M.A. 1902
 JACKSON, David Hamilton (M.A. 1892), 1893
 MACLAREN, James Malcolm, 1899 (5)
 MAJOR, Charles Thomas (M.A. 1893), 1894
 STEPHENSON, George Benjamin, 1902

(4) Headmaster of Richmond Road School.

(5) Sometime Director School of Mines, Coromandel.

GRADUATES.

BACHELORS OF LAWS.

BAUME, Frederick Ehrenfried, 1891
 BROWN, Alan St. Clair, 1902
 BUCKLAND, Charles Channing, 1896
 CLAYTON, Charles Ziegler (B.A. 1883), 1886
 COATES, Robert James, 1903
 FIELD, Edward Thurlow (M.A. 1893), 1895
 JACKSON, Thornton, 1900
 KENT, George Sedgwick, 1902
 MACDIARMID, Campbell Larnach, 1900
 MOORE, Joseph Harold (B.A. 1893), 1897
 PEACOCK, John Campbell, 1902
 RATTRAY, Robert Henry (B.A. 1878), 1880
 SHREWSBURY, Hugh (M.A. 1890), 1894

Admitted Ad Eundem Gradum:

BAKEWELL, Robert Hall, M.D. (St. Andrew's).
 BEATTY, William, the Reverend, M.A. (Royal, Ireland).
 BOURNE, Charles Frederick, M.A. (Oxford).
 COWIE, Edmund Mortlock, the Reverend, M.A. (Cambridge).
 NELSON, Charles Moseley, the Reverend, M.A. (Cambridge).
 O'RORKE, Honble. Sir George Maurice, M.A., Hon. LL.D. (Dublin).
 RUNCIMAN, David Williamson, the Reverend, M.A. (Glasgow).
 SLOMAN, John Flashman, B.A. (Sydney).
 TIBBS, James William, M.A. (Oxford).

UNIVERSITY SENIOR SCHOLARSHIPS.

1888—GREEN, T. H., Experimental Science (Chemistry
Heat, Electricity).

1889—CARTER, F. J., Latin and English

COWX, H. P., Mental Science.

GIFFORD, Sylvia E., Political Science.

NOTT, J. T., Natural Science (Zoology).

1890—JACKSON, D. H., Chemistry.

MACLAURIN, R. C., Mathematics.

1891—MAJOR, C. T., Mathematics.

SHREWSBURY, Elsie, Political Science.

1892—BOYLE, J., Chemistry.

1894—MAJOR, H. D. A., Geology.

1897—WATTS, P. H., Mathematics.

ALLEN, R. W., Chemistry.

1898—MACLAREN, J. M., Natural Science (Geology).

BAKER, W. H., Chemistry.

1899—FOX, C. E., Natural Science (Geology).

HUNTER, M. A., Chemistry.

POGSON, F. L., Latin (equal with another).

1900—CLARK, E. de C., Natural Science (Geology).

1901—HALLIWELL, L. V., Mathematics.*

LONG, F. C., Political Science.

*Also gained Scholarship in Chemistry, but debarred from holding two Scholarships.

SCHOLARSHIPS.

1901—SINCLAIRE, F., Latin.

STEPHENSON, G. B., Natural Science (Botany)

1902—DONOVON, W. Chemistry.

GRIFFIN, C. T. A., Mathematics.

JOHN TINLINE SCHOLARSHIP [ENGLISH].

1901—ARDERN, P. S.

EXHIBITION 1851 SCIENCE SCHOLARSHIP.

1892—JACKSON, D. H., *Chemistry.

1894—MACLAURIN, J. S., †Chemistry.

1901—MACLAREN, J. M., Geology

1902—HUNTER, M. A., Chemistry

SINCLAIR SCHOLARSHIP.

1885—WILSON, F. E.

1888—No Appointment.

1895—No Appointment.

1896—DINNEEN, Alice M. D.

1899—STEVEN, Martha M.

1902—IRONSIDE, Anne F.

*Renewed by Commissioners in 1894 for a third year.

†Relinquished the Scholarship.

SCHOLARSHIPS.

GILLIES SCHOLARSHIP.

- 1885—GREEN, T. H.
 - 1888—GRANT, Jane D.
 - 1895—DROMGOOL, J. C.
 - 1898—HUNTER, M. A.
 - 1901—No Appointment.
 - 1903—HANSON, David C.
-

SIR GEORGE GREY
SCHOLARSHIP.

- 1900—CRUMP, A. R.
 - 1902—GRIFFIN, C. J. A.
 - 1903—No Appointment.
-

EARLY ENGLISH TEXT SOCIETY PRIZE 1903.

Jacobsen, Francis V. J., *J.S.*

UNDERGRADUATES.

NOTE.—This list, in order to avoid unduly loading the pages of the Calendar, does not contain the names of those Undergraduates who have not, although keeping their names on the Books of the University, presented themselves during the last two years at College Examination.

REFERENCES.—*J.S.* means Junior Scholar; *Sin. S.* means Sinclair Scholar; *G.S.* means Gillies Scholar.

Four Years' Terms (for B.Sc.) have been kept by—

Hamilton, R. J. (M.A.)

Thomas, T. T. (B.A.)

Three Years' Terms have been kept by—

Barrance, K. M.

Bedford, R. H.

Cousins, H. G.

Darrow, H. A.

Fraser, C.

Holloway, J. E.

O'Dea, P.

Jacobsen, Francis V. J., *J.S.*

Macdonald, R. A.

Mules, E. K.

Vickerman, H.

Worley, F. P.

Two Years' Terms have been kept by—

Abbott, R. F. D.

Anderson, Elizabeth M.

Boult, C. N., *J.S.*

Brown, Mona M.

Buddle, C. B.

Burns, H. K.

Collins, Rhoda M.

Darby, Isabella M. K.

Dinneen, J. D., *J.S.*

Dunlop, F. G.

Endean, W. P.

Gatland, A. R., *J.S.*

UNDERGRADUATES.

Gleeson, J. C.
 Griffin, Elsie M.
 Holloway, J. A.
 Hughes, H. B.
 Kirkbride, Mary F.
 Lambourne, N. T.
 Mackay, S. M.
 Metcalfe, Marion H.
 Moody, R. N.
 Moore, W. E.
 McMaster, Marjorie A.
 Newton, C. P.
 Nolan, F. W.
 Northcroft, Agnes M.
 Pickmere, L. T.

Randerson, A. C.
 Robertson, May B.
 Short, A. W.
 Skelton, A. E. H.
 Smith, H. E. G.
 Stanton, J.
 Thorne, F. W.
 Ward, H. H.
 Wernham, W. J.
 Williams, Dulcie E.
 Williams, O. W.
 Woodward, W. H.
 Wright, H. N.
 Wyman, B. H.

One Year's Terms have been kept by—

Arnold, C. E.
 Boulton, Edith R.
 Bowen, Rosanna
 Caradus, E., *J.S.*
 Chitty, E.
 Evans, Jessie V.
 Flavell, D. R.
 Hampson, M. H.
 Heney, Dora A.
 Hosking, Florence V.
 Ironside, Anne F., *Sin. S.*
 Jones, Florence M. de V.
 Latham, R.

Mackie, L. J. M.
 Mill, J. C.
 Miller, C. F. C., *J.S.*
 Neumegen, E. E.
 Scott, Winifred, M.
 Simmonds, J. C.
 Skelton, M. N.
 Wilks, Doris E.
 Woolley, Alice M. L.
 Wylie, R. H.
 Young, Agnes J.
 Ziman, R. L.

UNDERGRADUATES.

Students who have not yet kept one Year's Terms—

Allaway, F. J.
Bewley, W. A. B.
Blakey, F. E.
Dellow, R. H.
Fendall, Phyllis M.
Finlayson, M. J.
Green, A.
Green, S.
Hewitt, H. B.
Hull, T. P.
Hunt, H.
Lewis, P. G.
Madill, J. D. C.
Mahon, Aileen A.
Maunder, G. T.
McClure, G. W.

Morton, J. D.
Myers, Ettie
Northcroft, E. H.
Northcroft, J. F. S.
Oliphant, W.
Panting, A. E.
Phillips, S. K.
Rosewarne, D. D.
Thorne, Jessie L.
Tudehope, C. B.
Walker, Florence
Webb, Edith M.
Williams, Florence
Woods, Greatrex F.
Worrell, Louisa

ANNUAL EXAMINATION.

The Students who passed in the several subjects at the
Annual Examination of the year 1903 were classified as follows :—

LATIN.

ADVANCED.

JACOBSEN, FRANCES V. J.

CLASS II.

O'DEA, P. }
 ZIMAN, R. L. }
 WILLIAMS, O. W.
 MILLER, C. F. C.
 GATLAND, A. R.
 IRONSIDE, ANNE F. }
 WOODWARD, W. H. }
 GRIFFIN, ELSIE A.
 STANTON, J.
 KIRKBRIDE, MARY FAITH
 SKELTON, M. N.
 WYLIE, R. H.
 JONES, FLORENCE DE V.
 BURNS, H. K.
 CHITTY, E.
 RANDERSON, A. C.

CLASS III.

ABBOTT, R. F. D.
 BEWLEY, W. A. B.
 BOULT, EDITH R.
 BROWN, MONA M.

BUDDLE, C. B.
 EVANS, JESSIE V.
 GLEESON, J. C.
 HAMPSON, M. H.
 HENRY, DORA A.
 MACKIE, L. J. M.
 MCMASTER, MARJORIE B.
 MILL, J. O.
 NEUMEGEN, E. E.
 SCOTT, WINIFRED
 WILKS, DORIS
 WOOLLEY, A. MAUD
 WRIGHT, H. N.

GREEK

CLASS II.

FLAVELL, D. R.

CLASS III.

WARD, H. H.

ENGLISH LANGUAGE AND LITERATURE.

CLASS I

JACOBSEN, FRANCES V. J.
 DINNEEN, J. D.

ANNUAL EXAMINATION.

WILLIAMS, O. W.
BROWN, MONA M.
GATLAND, A. R.

CLASS II.

STANTON, J.
RANDERSON, A. C.
HAMPSON, M. H.
FRASER, C.
MILLER, C. F. C.
IRONSIDE, ANNE F.
CHITTY, E.
BUDDLE, C. B.

CLASS III.

ABBOTT, R. F. D.
BOULT, EDITH R.
EVANS, JESSIE V.
FINLAYSON, M.
GLEESON, J. C.
KIRKBRIDE, MARY FAITH
MACKIE, L. J. M.
NEUMEKEN, E. E.
PANTING, E.
WILKS, DORIS
WOODWARD, W. H.
WRIGHT, H. N.
WOOLLEY, A. M.
WYLLIE, R.
ZIMAN, R.

FRENCH.

CLASS I.

WILLIAMS, O. W.
GATLAND, A. R.
RANDERSON, A. C.

CLASS II.

GRIFFIN, ELSIE
SIMMONDS, J. C.
SMITH, H.
WORLEY, F. P.
CHITTY, E.
JONES, FLORENCE DE V.
ROBERTSON, MAY B.
WRIGHT, H. N.

CLASS III.

BOULT, EDITH R.
EVANS, JESSIE V.
MACDONALD, R. A.
SCOTT, WINIFRED M.

GERMAN.

CLASS I.

DINNEEN, J. D.

CLASS III.

JONES, FLORENCE DE V.

HISTORY AND
POLITICAL ECONOMY.

CLASS I.

MACDONALD, R. A.
O'DEA, P.

ANNUAL EXAMINATION.

CLASS II.

BLAKEY, J. E.
 FLAVELL, D. R. }
 MACKIE, L. J. M. }

CLASS III.

HENEY, DORA A.
 METCALFE, MARION H.
 SKELTON, A. H.

JURISPRUDENCE AND
 CONSTITUTIONAL HISTORY.

CLASS I.

O'DEA, P.
 WARD, H. H.

CLASS II.

DINNEEN, J. D.
 BURNS, H. K.
 ZIMAN, R. J.
 SKELTON, M. N.
 STANTON, J.
 WOODWARD, W. H.
 MACKIE, L. J. M.
 HAMPSON, M. H.
 GLEFSON, J. C.
 MILLER, C. J. C.
 ABBOTT, R. F. D.
 OLIPHANT, W.
 SKELTON, A. H.
 NEUMEGEN, E. E.
 BUDDLE, C. B.
 FINLAYSON, M. J.

CLASS III.

BEWLEY, W. A. B.

PURE MATHEMATICS.

CLASS I.

CARADUS, E.
 WORLEY, F. P.
 WOOLLEY, A. M. L.

CLASS II.

DINNEEN, J. D.
 MCMASTER, MARJORIE B.
 BURNS, H. K.
 CHITTY, E.

CLASS III.

BEDFORD, R. H.
 FENDALL, P. M.
 FLAVELL, D. R.
 GRIFFIN, ELSIE
 HENEY, DORA A.
 JONES, FLORENCE DE V.
 KIRKBRIDE, MARY FAITH
 LATHAM, R.
 MACDONALD, R. A.
 RANDERSON, A. C.
 ROBERTSON, MAY B.
 THORNE, J.
 WILLIAMS, O. W.

APPLIED MATHEMATICS.

CLASS I.

HAMILTON, R. J., M.A.
 IRONSIDE, ANNE F.

ANNUAL EXAMINATION.

CLASS II.

THOMAS, P.
 McMASTER, MARJORIE B.
 BEDFORD, R. H.

CLASS III.

GRIFFIN, ELSIE
 KIRKBRIDE, MARY FAITH
 LATHAM, R.
 MAUNDER, G. T.
 SIMMONDS, J. C.
 WOOLLEY, A. M. L.

PHYSICS.

CLASS I.

CARADUS, E.
 HAMILTON, R. J., M.A.

CLASS II.

SIMMONDS, J. C.

CLASS III.

LATHAM, R.

CHEMISTRY.

CLASS I.

CARADUS, E.
 GATLAND, A. R.

CLASS II.

THOMAS, T. T., B.A.

CLASS III.

ROGET, H. H.

ADVANCED CHEMISTRY.

CLASS I.

WORLEY, F. P.

PRACTICAL CHEMISTRY.

ALLAWAY, F. J.
 CARADUS, E.
 THOMAS, T. T., B.A.
 WORLEY, F. P.

PRACTICAL CHEMISTRY.

SENIOR.

DONOVAN, W.

BIOLOGY.

CLASS I.

GRIFFIN, ELSIE
 IRONSIDE, ANNE F.

CLASS II.

MILL, J. C.

CLASS III.

ROBERTSON, MAY B.
 SCOTT, WINIFRED M.

ANNUAL EXAMINATION.

BOTANY.

ADVANCED.

CLASS I.

HOLLOWAY, J. E.

JUNIOR.

CLASS III.

GREEN, A. W.

MAHON, EILEEN A.

PRACTICAL BIOLOGY.

SENIOR.

GRIFFIN, ELSIE

MILL, J. C.

ROBERTSON, MAY B.

JUNIOR.

IRONSIDE, ANNE F.

ALLAWAY, F. J.

SCOTT, WINIFRED M.

ROSEWARNE, D. D.

PRACTICAL BOTANY.

JUNIOR.

MAHON, EILEEN A.

GREEN, A. W.

GEOLOGY.

CLASS I.

FRASER, C.

CLASS II.

BEDFORD, R. H.

CLASS III.

LATHAM, R.

PANTING, E.

PRACTICAL GEOLOGY.

HONOURS.

DONOVAN, W.

SENIOR.

FRASER, C.

BEDFORD, R. H.

JUNIOR.

PANTING, E.

LATHAM, R.

MENTAL SCIENCE.

CLASS I.

BROWN, MONA M.

CLASS II.

O'DEA, P.

METCALFE, MARION H.

ACOUSTICS.
(SCHOOL OF MUSIC).

CLASS I.

HUNT, H. G.

WEBB, EDITH M.

BELLINGHAM, W. J.

ANNUAL EXAMINATION.

CLASS II.

HANNA, PEARLE
HAMPSON, MAY
GIBBONS, JEANNIE

CLASS III.

THORNE, EMILY
BLADES, MURIEL R.

SCHOOL OF MUSIC.

ADVANCED DIVISION.

CLASS I.

BINSTED, ROSA
HUNT, H. G.
PHILLIPS, S. K.
GRAINGER, BEATRICE
BELLINGHAM, W. J.

CLASS II.

VERRALL, A.
HANNA, PEARLE

CLASS III.

CALEY, W.

INTERMEDIATE DIVISION.

CLASS I.

SPRAGUE, H.

CLASS II.

COLLIS, KATE
SWALES, I. M.

CLASS III.

MADILL, J. D. C.
SHEPPARD, GRETA
BOULT, EDITH R.
BROWN, E.

JUNIOR DIVISION.

CLASS I.

HUGHES, VIOLET
PATRICK, MINNIE
CURTIS, M
MOODIE, A. W.
LOVATT, OLIVE }
MOSES, RUBY }

CLASS III.

ALEXANDER, WINNIE
GREEN, S.
HEATH, JESSIE B.

After the Annual Examination held in October, 1903, the following Students were accredited with having kept the Terms of the year :—

ABBOTT, R. F. D.
BEDFORD, R. H.
BOULT, E. R.

BROWN, M. M.
BUDDLE, C. B.
BURNS, H. K.

ANNUAL EXAMINATION.

CARADUS, E.	LATHAM, R.
CHITTY, E.	MACDONALD, R. A.
DINNEEN, J. D.	MCMASTER, M. A.
EVANS, J. V.	MACKIE, L. J. M.
FINLAYSON, M. J.	MILLER, C. F. C.
FLAVELL, D. R.	NEUMEGEN, E. E.
FRASER, C.	O'DEA, P.
GATLAND, A. R.	RANDERSON, A. C.
GLEESON, J. C.	SCOTT, W. M.
GRIFFIN, E. M.	SIMMONDS, J. C.
HAMILTON, R. J., M.A.	STANTON, J.
HAMPSON, M. H.	THOMAS, T. T., B.A.
HENEY, D. A.	WILLIAMS, O. W.
IRNSIDE, A. F.	WOOLLEY, A. M. L.
JACOBSEN, F. V. J.	WORLEY, F. P.
JONES, F. M. V.	WRIGHT, H. N.
KIRKBRIDE, M. F.	ZIMAN, R. L.

PREMIUMS.

Latin : (No Award).
 English : J. D. DINNEEN.
 Pure Mathematics : E. CARADUS.
 Applied Mathematics : ANNE F. IRNSIDE.
 Chemistry : E. CARADUS.
 Physics : E. CARADUS.
 Biology : ELSIE GRIFFIN.
 Geology : C. FRASER.
 French : O. W. WILLIAMS.
 Jurisprudence and Constitutional History : P. O'DEA.

Presentations to College Library

DURING 1903.

—◆—

FROM MESSRS. MACMILLAN AND Co.—

- Allcocks—Theoretical Geometry for Beginners.
- Ayton—Lays, edited by Cotterill.
- Bacon—Selections from Essays, edited by Oswald Platt.
- Barnard and Child—New Geometry for Schools.
- Barry—History of Greece.
- Browning, Robert, by G. K. Cherlock.
- Chaucer—Knight's Tale, edited by Pollard.
- Chaucer—Prologue, edited by Pollard.
- Cohen—Theoretical Organic Chemistry.
- Cornelius Nepos, Vol. II., edited by Wilkinson.
- Duncan—Applied Mechanics.
- Edser—Light for Students.
- Edgar—Practical Exercises in Geometry.
- English Men of Letters—
 - Samuel Richardson, by Austin Dobson.
 - John Ruskin, by Harrison.
 - Alfred Tennyson, by Alfred Lyall.
- Globe Poetry Reader—Advanced Course.
- Goebel, Ferdinand—Rübezahl.
- Golden Treasury Series—Essays of Richard Steele.
- Golden Sayings of Epectetus.
- Hall—Graphical Algebra.
- Hall and Stevens—School Geometry, Parts I and II.
- Hall and Stevens—School Geometry, Part III.
- Harrison—Plane and Solid Geometry.
- Holmes—Autocrat of the Breakfast Table.
- Jones—Introductory Chemistry for Intermediate Schools.

Lamb—Tales from Shakespeare, edited by Punchard.
 Longfellow—Evangeline, edited by Cotterill.
 Longfellow—Hiawatha, edited by Cotterill.
 Mazarin, edited by Arthur Hassall.
 Munby—Experiments in Magnetism and Electricity.
 Nesfield—Errors in English Composition.
 Nesfield—Senior Course of English Composition.
 Pliny—Selected Letters, edited by Mervill.
 Quintus Curtius Rugus, Book VIII., edited by Phillips.
 Representative English Comedies, from Beginning to Shakespeare.
 Robson—Practical Exercises in Heat.
 Tibullus—Selections, edited by Postgate.
 Wildenbruch, Evon—Das Edle Blut, edited by Otto Stepmann.

FROM P. S. ARDERN, Esq., M.A.—
 Corneille.

FROM THE ROYAL ACADEMY OF MEDICINE IN IRELAND—
 Transactions, Vol. XX.

FROM MINES DEPARTMENT—
 Thirty-Sixth Annual Report of Colonial Laboratory, by Dr. Macclaurin.

FROM NEW ZEALAND INSTITUTE—
 Proceedings, Vol. XXXV.

FROM UNIVERSITY OF ST. ANDREW'S—
 Calendar, 1903-04.

FROM UNIVERSITY OF GLASGOW—
 Calendar, 1903-04.

FROM OWEN'S COLLEGE, MANCHESTER—
 Calendar, 1903-04.

FROM YORKSHIRE COLLEGE, LEEDS—
 Calendar, 1903-04.

FROM UNIVERSITY OF SYDNEY—
 Record of Jubilee Proceedings.
 The Union Book, 1902.

FROM UNIVERSITY OF ADELAIDE—

Calendar, 1903.

Regulations and Syllabus, 1903.

Report, 1902.

FROM UNIVERSITY OF OTAGO—

Calendar, 1903.

FROM VICTORIA COLLEGE—

Calendar, 1903.

FROM UNIVERSITY OF CAPE OF GOOD HOPE—

Calendar, 1903-04.

FROM MCGILL COLLEGE, MONTREAL—

Calendar, 1903-04.

FROM HARVARD UNIVERSITY—

Calendar, 1902-03.

Annual Reports, 1901-02.

FROM JOHNS HOPKINS UNIVERSITY—

Circulars, Vol. XXII., No. 160 ; also Nos. 163 and 164.

Report, 25th Anniversary.

FROM NORTH-WESTERN UNIVERSITY—

Bulletin, 1902-03 (2 copies).

FROM SMITH COLLEGE—

Twenty-Ninth Official Calendar, 1902-03.

Annual Report, 1901-02.

FROM UNIVERSITY OF MICHIGAN—

Calendar, 1902-03.

FROM VASSAR COLLEGE—

Catalogue, 1902-03.

FROM WELLESLEY COLLEGE—

Catalogue, 1902-03.

FROM YALE UNIVERSITY—

Catalogue, 1902-03.

FROM SMITHSONIAN INSTITUTION—

Two Volumes.

FROM UNIVERSITY OF PENNSYLVANIA—

Catalogue, 1902-03.

FROM UNIVERSITY OF BOMBAY—

Calendar, 1903-04.

FORM OF LEGACY.

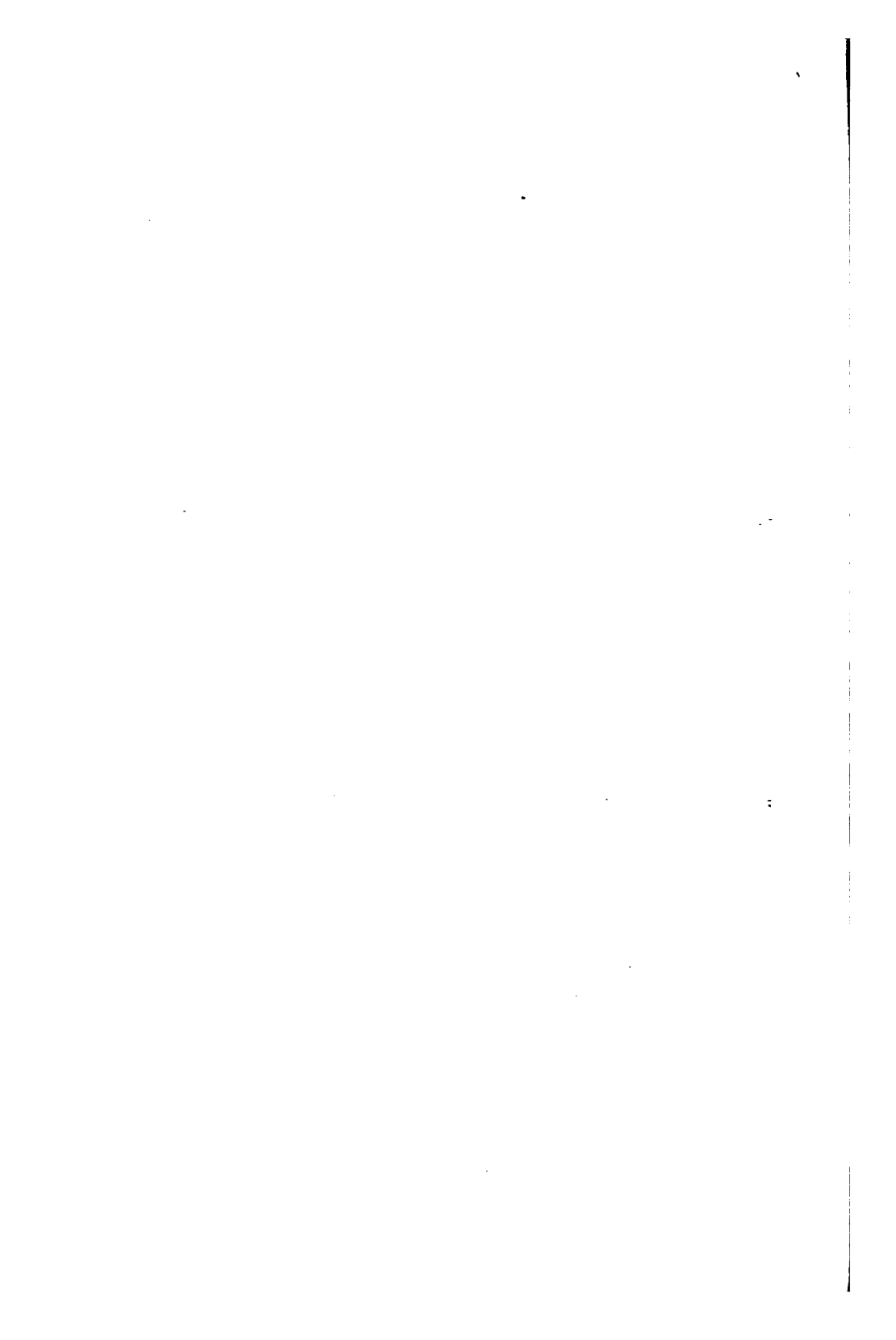
I give (free from legacy duty) the sum of pounds to the Auckland University College, established at Auckland by "The Auckland University College Act, 1882," and I declare that the receipt of the Registrar for the time being of the said College shall be a sufficient discharge for the said legacy.

NOTE.—If any special direction or condition is to be attached to the Legacy, insert it here.

FORM OF ATTESTATION FOR A WILL.

Signed by the testator as and for his last will and testament, in the sight and presence of us together, who in his sight and presence, at his request and in the sight and presence of each other, have hereunto subscribed our names as witnesses.

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v.

ANNUAL EXAMINATION,

October, 1903.

LATIN TRANSLATION.

Examiner: PROFESSOR TALBOT-TUBBS.

1. Translate:—

- (a) 'Si tabulam de naufragio stultus arripuerit, extorquebitne eam sapiens, si potuerit?' Negat, quia sit iniurium. 'Quid dominus navis? eripietne suum?' 'Minime, non plus quam navigantem in alto eicere de navi velit, quia sua sit. Quoad enim perventum est eo, quo sumpta navis est, non domini est navis, sed navigantium.' 'Quid? si una tabula sit, duo naufragi, eique sapientes, sibine uterque rapiat, an alter cedat alteri?' 'Cedat vero, sed ei, cuius magis intersit vel sua vel rei publicae causa vivere.' 'Quid, si haec paria in utroque?' 'Nullum erit certamen, sed quasi sorte aut micando victus alteri cedet alter.'
- (b) sustines enim non parvam expectationem imitandae industriae nostrae, magnam honorum, non nullam fortasse nominis. Suscepisti onus praeterea grave et Athenarum et Cratippi; ad quos cum tamquam ad mercaturam bonarum artium sis profectus, inanem redire turpissimum est dedecorantem et urbis auctoritatem et magistri.
- (c) Haec est vis huius anuli et huius exempli: si nemo sciturus, nemo ne suspicaturus quidem sit, cum aliquid divitiarum, potentiae, dominationis, libidinis causa feceris, si id dis hominibusque futurum sit semper ignotum, sisne facturus. Negant id fieri posse. Nequaquam potest id quidem; sed quaero, quod negant posse, id si posset, quidnam facerent. Urgent rustice sane; negant enim posse et in eo perstant; hoc verbum quid valeat, non vident. Cum enim quaerimus, si celare possint, quid facturi sint, non quaerimus, possintne celare, sed tamquam tormenta quaedam adhibemus, ut, si responderint se impunitate proposita facturos, quod expediat, facinorosos se esse fateantur.

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- (d) M. Marius Gratidianus, propinquus noster, C. Sergio Oratae vendiderat aedes eas, quas ab eodem ipse paucis ante annis emerat. Eae serviebant, sed hoc in mancipio Marius non dixerat. Adducta res in iudicium est. Oratam Crassus, Gratidianum defendebat Antonius. Ius Crassus urgebat, 'quod vitii venditor non dixisset sciens, id oportere praestari,' aequitatem Antonius, 'quoniam id vitium ignotum Sergio non fuisset, qui illas aedes vendidisset, nihil fuisse necesse dici, nec eum esse deceptum, qui, id, quod emerat, quo iure esset, teneret.'
- (e) scilicet omnibus est labor inpendendus, et omnes cogendae in sulcum ac multa mercede domandae. sed truncis oleae melius, propagine vites respondent, solido Paphiae de robore myrtus; plantis et durae coryli nascuntur et ingens fraxinus Herculeaeque arbor umbrosa coronae Chaonique Patris glandes; etiam ardua palma nascitur et casus abies visura marinos. inseritur vero et fetu nucis arbutus horrida, et steriles platani malos gessere valentes; castaneae fagus, ornusque incanuit albo flore piri, glandemque sues fregere sub ulmis.
- (f) an mare quod supra memorem, quodque adluit infra? ane lacus tantos? te, Lari maxime, teque, fluctibus et fremitu adsurgens Benace marino? an memorem portus Lucrinoque addita claustra atque indignatum magnis stridoribus aequor Iulia qua ponto longe sonat unda refuso Tyrrhenusque fretis inmittitur aestus Avernis? haec eadem argenti rivos aerisque metalla ostendit venis atque auro plurima fluxit.
- (g) ac si quos haud ulla viros vigilantia fugit, ante locum similem exquirunt, ubi prima paretur arboribus seges et quo mox digesta feratur, mutatam ignorent subito ne semina matrem, quin etiam caeli regionem in cortice signant, ut quo quaeque modo steterit, qua parte calores

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austrinos tulerit, quae terga obverterit axi,
restituunt : adeo in teneris consuescere multum est.

- (h) sollicitant alii remis freta caeca, ruuntque
in ferrum, penetrant aulas et limina regum ;
hic petit excidiis urbem miserosque Penates,
ut gemma bibat et Sarrano dormiat ostro ;
condit opes alius defossoque incubat auro ;
hic stupet attonitus rostris ; hunc plausus hiantem
per cuneos geminatus enim plebisque patrumque
corripuit ; gaudent perfusi sanguine fratrum,
exilioque domos et dulcia limina mutant
atque alio patriam quaerunt sub sole iacentem.

2. Translate, with brief explanation of noteworthy points of
syntax or interpretation :—

- (a) Itaque praeclarum a maioribus accepimus morem rogandi
iudicis, si eum teneremus, QUAE SALVA FIDE FACERE POSSIT.
- (b) Itaque Calpurnius cum demolitus esset cognossetque Clau-
dium aedes postea proscripsisse quam esset ab auguribus
demoliri iussus, arbitrum illum adegit, QUIDQUID SIBI DARE
FACERE OPORTERET EX FIDE BONA.
- (c) Neque est contra naturam spoliare eum, si possis.
- (d) Etenim quod a Stoicis dicitur id habet hanc sententiam
. . . quae secundum naturam essent ita legere si ea virtuti
non repugnarent.
- (e) Nec varios inhiant pulchra testudine postes
illusasque auro vestes, Ephyreiaque aera.
- (f) Ipsa satis tellus, cum dente recluditur unco,
sufficit humorem, et gravidas, cum vomere, fruges.
- (g) immota manet, multosque nepotes
multa virum volvens durando saecula vincit.

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- (h) Ipsa ingens arbos, faciemque simillima lauro ;
et si non alium late iactaret odorem
laurus erat.

3. (a) What metrical licenses does Vergil allow himself ?

- (b) Collect from Georgics II instances of the employment of
(1) the Infinitive, (2) participles, which differ from normal
prose usage.

4. Briefly comment upon :—

iuvat Ismara Baccho conserere—Alcinoi silvae—haec
loca non tauri spirantes naribus ignem invertere—et vacuis
Clanuis non aequos Acerris—frigida Tempe—virginibus bacc-
hata Lacaenis Taygeta—hinc ille Gyges inducitur a Platone—
qui stadium currit—iudicia contraria—sponsionem facere—
et cum primo luci domum venisse dicitur—O Fides alma
apta pinnis et ius iurandum Iovis.

5. Give a short account of the philosophy of Epicurus, the
Academy, the Stoics. Discuss and criticize Cicero's treat-
ment of his subject in *De Officiis* III.

6. Translate into English :—

Hic mihi etiam audebit mentionem facere Mamertinae
laudationis ! in qua quam multa sint volnera, quis est
vestrum, iudices, quin intellegat ? Primum in iudiciis qui
decem laudatores dare non potest, honestius est ei nullum
dare quam illum quasi legitimum numerum consuetudinis non
explere. Tot in Sicilia civitates sunt, quibus tu per triennium
prae-fuisti ; arguunt ceterae, paucae et parvae et metu re-
pressae silent, una laudat. Hoc quid est nisi intellegere, quid
habeat utilitatis vera laudatio, sed tamen ita provinciae
prae-fuisse, ut hac utilitate necessario sit carendum ? Deinde,
quod alio loco antea dixi, quae est ista tandem laudatio,
cuius laudationis legati et principes et publice tibi navem
aedicatam et privatim se ipsos abs te spoliatos expilatosque
esse dixerunt ? Postremo quid aliud isti faciunt, cum te
soli ex Sicilia laudant, nisi testimonio nobis sunt omnia te
sibi esse largitum, quae tu de re publica nostra detraxeris ?

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LATIN COMPOSITION AND GRAMMAR.

Examiner: PROFESSOR TALBOT-TUBBS.

1. Translate into Latin :—

(a) *For Students who have not yet kept a first year's terms.*

It is perhaps well, my dear Marcus, that I should explain why I have chosen to treat this rather than another subject. For several years I have lived retired from politics, to which even the death of our quondam master (tyrannus) does not leave me free to return. But as you know from my very boyhood I resolved to pursue an official career (honoribus inservire) and give myself wholly to the public service. Had I then sought my own advantage or given rein to pleasures unworthy of a man of integrity, I should not have attained that general esteem which has ever seemed to me the greatest reward that he can enjoy who seeks only the common good. I am inclined to think therefore that it is peculiarly fitting that I should discuss the means by which a man may both satisfy his own conscience and win the honour of his countrymen.

(Do not use Oratio Obliqua.)

(b) *For all other Students.*

Suddenly and without orders, the soldiers broke into the town ; and at once there began an indiscriminate plundering and massacre. It was too late to restrain their cruelty, their avarice or licentiousness. All the outrages of which soldiers are capable in the fury of a storm, all the excesses of which men can be guilty when their passions are heightened by the contempt and hatred which difference in manners and religion inspires, were committed. Above thirty thousand of the innocent inhabitants perished on that unhappy day, and ten thousand were carried away as slaves. Muley-Hascen took possession of a throne surrounded by

ANNUAL EXAMINATION.

carnage, and ill secured by the hatred of his subjects upon whom he had brought such calamities, or the unconcealed derision of those who had prompted his folly and his failure. Charles could do no more than vainly regret the fatal blot upon his victory ; in all that scene of horror there was but one ray of light to pierce the gloom. Ten thousand Christian slaves met him as he entered the town, and falling on their knees thanked and blessed him as their deliverer.

2. Translate into English :—

“ An unnatural sacrifice.”

I nunc, Ausonios ferro populare Penates
et vetitas molire vias ! i, pacta resigna
per cunctos iurata deos ! sic praemia reddit
Carthago, et tales iam nunc tibi solvit honores.
quae porro haec pietas, delubra adspargere tabo ?
heu primae scelerum causae mortalibus aegris,
naturam nescire deum ! iusta ite precati
ture pio, caedumque feros avertite ritus :
mite et cognatum est homini deus. hactenus, oro,
sit satis ante aras caesos vidisse iuencos.
aut si velle nefas superos fixumque sedetque,
me, me, quae genui, vestris absumite votis.
cur spoliare iuvat Libycas hac indole terras ?

3. (i.) Write down :—

- (a) *Abl. sing., gender, meaning* of laurus, crinis, praeceps, vas, merges.
- (b) *First pers. sing. perf. act.* of diligo, divido, reperio, vomo, pellicio, arcesso, abolesco, consenesco ; and conjugate the Imperf. Subjve. of orior, morior.
- (ii.) (a) What is the “predicative” use of the Adjective ? and what are its limits in prose.
- (b) Construct examples to show the various relations which *dum, antequam*, may establish between the subordinate clause and the principal.

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(c) Turn into Oratio Obliqua (past time) :—

Hoc te unum rogo ; si pro tua clementia statueris illis parcere, noli nobis vitam adimere. Invident quidem finitimi, iam expectant dum tu contra nos bellum pares. Quid tandem est nobis miserius? Num tu vis nos in desperationem omnium rerum adducere? Magnam ego tui fiduciam nisi haberem nulla esset spes. Neve inquinetur haec tua victoria tanta crudelitate.

(d) Discuss and illustrate the construction in the following :—

1. Salve aeternum mihi, maxime Palla.
2. Primus turmas invasit agrestes Aeneas, omen pugnae.
3. quo non felicius alter ungere tela manu.
4. multoque iacebat membra deo victus.
5. an aetas mea tunc maturior bello gerendo fuit?
6. Ille autem, sententiam rogatus negavit . . .
7. Ne multa dicas, sed multum.
8. Sensit medios delapsus in hostes.

4. Translate, observing Latin idiom :—

1. There are two ways of winning public confidence.
2. Of all men known to history he understood best the value of self-confidence.
3. The man's as honest as the day.
4. Nothing venture, nothing have.
5. He died within three days of his return, before he could arrange his affairs.
6. This is as large again.

ANNUAL EXAMINATION.

LATIN COMPOSITION, &c. (ADVANCED).

Examiner: PROFESSOR TALBOT-TUBBS.

1. Translate into Latin :—

He was pronounced guilty of the act of which he had in the most solemn manner protested he was innocent ; he was sent to the Tower ; he was turned out of all his places, and his name was struck out of the Council Book. It might well have been thought that the ruin of his fame and of his fortunes was irreparable. But there was about his nature an elasticity which nothing could subdue. In his prison indeed he was as violent as a falcon just caged, and would if he had been long detained have died of mere impatience. His only solace was to contrive wild and romantic schemes for extricating himself from his difficulties and avenging himself on his enemies. When he regained his liberty he stood alone in the world, a dishonoured man more hated by the Whigs than any Tory, and by the Tories than any Whig, and reduced to such poverty that he talked of retiring to the country, living like a farmer and putting his Countess into the dairy to churn and make cheeses. Yet even after this fall that mounting spirit rose again and rose higher than ever.

2. Translate, with comments :—

(a) Cum vero fidem ac religionem tuam iam alteri addictam pecunia accepta habueris, post eandem adversario tradideris maiore pecunia, ei quem fefelleris ne pecuniam quidem reddes? quem mihi tu Bulbum, quem Staienum? quod unquam huiusce modi monstrum aut prodigium vidimus aut vidimus qui cum reo transigat, post cum accusatore decidat? ipse solus reum absolutum, a quo pecuniam acceperit, condemnet, pecuniam non reddat? hunc hominem in iudicium numero habebimus? hic de capite libero iudicabit!

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huic iudicialis tabella committetur? quam iste non modo
cera, sed etiam sanguine si visum erit, notabit.

- (b) St. Per deos atque homines dico, ne tu illuc agrum
tuom sis unquam fieri neque gnati tui :
ei rei argumenta dicam. Ph. Audire edepol lubet.
- St. Primum omnium olim terra quom proscinditur
in quinto quoque sulco moriuntur boves.
- Ph. Apage. St. Acheruntis ostium in nostris agro.
tum vinum prius quam coctumst pendet putidum.
postid, frumenti quom alibi messis maxumast,
tribus tantis illi minus redit quam obseveris.
- Ph. Em istis oportet operari mores malos,
si in operando possint interfieri.
- St. Neque unquam quisquamst quous ille ager fuit
quin pessume ei res vorterit. quoum fuit
alii exulatum abierunt, alii emortui,
alii se suspendere. em nunc hic quous est
ut ad incitas redactust. Ph. Apage a me istum agrum.

3. Discuss the syntax of the following :—

- (a) Delitui dum vela darent, si forte dedissent.
- (b) quibus in patriam per aequora vectis
pontus et ostriferi fauces tentantur Abydi.
- (c) neque est quous amplius lubens faxim.
- (d) si mens non laeva fuisset,
impulerat ferro Argolicas foedare latebras,
Troiaque nunc stares.
- (e) quin et Prometheus dulci laborum (al. laborem) decipitur
sono.
- (f) quodsi me noles discedere,
reddes dulce loqui reddes ridere decorum.
- (g) si curatus inaequali tonsore capillos
occurro, rides.

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4. Answer not more than two of the following :—

1. What was the actual position of the Senate in the republican constitution? Prove your view by examination of its forms and procedure.
2. Give a brief sketch of the development of Latin. What forces, external or internal, were effective in modifying form, syntax, vocabulary?
3. Lucreti poemata ut scribis ita sunt ; multis luminibus ingeni, multae tamen artis (Cic ad Q. Fr. ii. 11). Discuss the appositeness of this criticism.
4. Trace the results, social and political, of the Punic Wars, and show their connection with the rise of autocracy.
5. Plan and describe a Roman middle-class house of the last century of the Republic.

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GREEK TRANSLATION.

Examiner: PROFESSOR TALBOT-TUBBS.

1. Translate—

- (a) Πρὸς δὲ τοιούτοις οἱ νέοι μοι ἐπακολουθοῦντες οἷς μάλιστα σχολή ἐστίν, οἱ τῶν πλουσιωτάτων, αὐτόματοι, χαίρουσιν ἀκοίοντες ἐξεταζομένων τῶν ἀνθρώπων, καὶ αὐτοὶ πολλάκις ἐμὲ μιμοῦνται, εἴτα ἐπιχειροῦσιν ἄλλους ἐξετάζειν· κᾶπειτα, οἶμαι, εὐρίσκουσι πολλὴν ἀφθονίαν οἰομένων μὲν εἶδέναι τι ἀνθρώπων, εἰδότες δὲ ὀλίγα ἢ οὐδέν. ἐντεῦθεν οὖν οἱ ὑπ' αὐτῶν ἐξεταζόμενοι ἐμοὶ ὀργίζονται, ἀλλ' οὐχ αὐτοῖς, καὶ λέγουσιν ὡς Σωκράτης τίς ἐστι μιαιώτατος καὶ διαφθείρει τοὺς νέους· καὶ ἐπειδὴν τις αὐτοὺς ἐρωτᾷ, ὃ τι ποίω καὶ ὃ τι διδάσκω, ἔχουσι μὲν οὐδὲν εἰπεῖν, ἀλλ' ἀγνοοῦσιν, ἵνα δὲ μὴ δοκῶσιν ἀπορεῖν, τὰ κατὰ πάντων τῶν φιλοσοφοῦντων πρόχειρα ταῦτα λέγουσιν, ὅτι τὰ μετέωρα καὶ τὰ ὑπὸ γῆς, καὶ θεοὺς μὴ νομίζειν, καὶ τὸν ἥττω λόγον κρείττω ποιεῖν.
- (b) Ἀναξαγόρου οἶε κατηγορεῖν, ὃ φίλε Μέλητε, καὶ οὕτω καταφρονεῖς τῶνδε καὶ οἶε αὐτοῖς ἀπείρους γραμμάτων εἶναι, ὥστε οὐκ εἶδέναι ὅτι τὰ Ἀναξαγόρου βιβλία τοῦ Κλαζομενίου γέμει τοιούτων τῶν λόγων; καὶ δὴ καὶ οἱ νέοι ταῦτα παρ' ἐμοῦ μανθάνουσιν, ἃ ἔξεστιν ἐνίοτε, εἰ πάνυ πολλοῦ, δραχμῆς ἐκ τῆς ὀρχήστρας πριαμένους Σωκράτους καταγελᾶν, ἐὰν προσποιῇται ἑαυτοῦ εἶναι, ἄλλως τε καὶ οὕτως ἄτοπα ὄντα.
- (c) καὶ τοι εἰ μὲν τι ἀπὸ τούτων ἀπέλαυν καὶ μισθὸν λαμβάνων ταῦτα παρεκελευσμένην, εἶχον ἂν τινα λόγον· νῦν δὲ ὁρᾶτε δὴ καὶ αὐτοί, ὅτι οἱ κατήγοροι τᾶλλα πάντα ἀναισχύντως οὕτω

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κατηγοροῦντες τοῦτό γε οὐχ οἰοί τε ἐγένοντο ἀπαναισχυντῆσαι
 παρασχόμενοι μάρτυρα, ὥς ἐγώ ποτέ τινα ἢ ἐπραξάμην μισθὸν
 ἢ ἥττησα.

- (d) ἡμῖν δ', ἐπειδὴ ὁ λόγος οὕτως αἰρεῖ, μὴ οἷδέν ἄλλο σκεπτόν
 ἢ ἢ ὅπερ νῦν δὴ ἐλέγομεν, πότερον δίκαια πράξομεν καὶ
 χρήματα τελοῦντες τοιούτοις τοῖς ἐμὲ ἐνθόνδε ἐξάξουσιν καὶ
 χάριτας, καὶ αὐτοὶ ἐξάγοντές τε καὶ ἐξαγόμενοι, ἢ τῇ ἀληθείᾳ
 ἀδικήσομεν πάντα ταῦτα ποιοῦντες· κἂν φαινώμεθα ἀδικοῦντα
 ἐργαζόμενοι, μὴ οὐδέ τι ὑπολογίζεσθαι οὐτ' εἰ ἀποθνήσκῃ δὲ
 παραμένοντας καὶ ἡσυχίαν ἄγοντας, οὔτε ἄλλο ὅτιοῦν πάσχειν
 πρὸ τοῦ ἀδικεῖν.
- (e) σὺν δὲ οὔτε Λακεδαίμονα προηροῦ οὔτε Κρήτην, ἃς δὴ ἐκάστοτε
 φῆς εὐνομεῖσθαι, οὔτε ἄλλην οὐδεμίαν τῶν Ἑλληνίδων πόλεων
 οὐδὲ τῶν βαρβαρικῶν, ἀλλὰ ἐλάττω ἐξ αὐτῆς ἀπεδήμησας ἢ
 οἱ χωλοὶ τε καὶ τυφλοὶ καὶ οἱ ἄλλοι ἀνάπηροι· οὕτω σοι δια-
 φερόντως τῶν ἄλλων Ἀθηναίων ἡρεσκεν ἢ πόλις τε καὶ ἡμεῖς
 οἱ νόμοι δηλὸν ὅτι· τίτι γὰρ ἂν πόλις ἀρέσκοι ἄνευ νόμων;
 νῦν δὲ δὴ οὐκ ἐμμένεις τοῖς ὁμολογημένοις; ἐὰν ἡμῖν γε πείθῃ,
 ὦ Σώκρατες· καὶ οὐ καταγέλαστός γε ἔσει ἐκ τῆς πόλεως
 ἐξελθών.
- (f) οὐτ' ἄρα ποίμνησιν καταῖσχεται οὐτ' ἀρότοισιν,
 ἀλλ' ἢ γ' ἄσπαρτος καὶ ἀνήροτος ἤματα πάντα
 ἀνδρῶν χηρεῖε, βόσκει δέ τε μηκάδας αἰγας.
 οὐ γὰρ Κυκλώπεσσι νέες πάρα μιλοπάργηροι,
 οὐδ' ἄνδρες νηῶν ἐνὶ τέκτονες, οἳ κε κάμοιεν
 νῆας ἐῴστέλμους, αἳ κεν τελέοιεν ἕκαστα
 ἄσπε' ἐπ' ἀνθρώπων ἰκνεύμεναι, οἳά τε πολλὰ
 ἄνδρες ἐπ' ἀλλήλους νηυσὶν περώωσι θάλασσαν·
 οἳ κέ σφιν καὶ νῆσον εὐκτιμένην ἐκάμοντο.
- (g) Ἐνθα δὲ πῦρ κήαντες ἐθίσαμεν ἥδὲ καὶ αὐτοὶ
 τυρῶν αἰνύμενοι φάγομεν, μένομέν τέ μιν ἔνδον

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ἤμενοι, εἶος ἐπήλθε νέμων· φέρε δ' ὄβριμον ἄχθος
 ὕλης ἀζαλῆς, ἵνα οἱ ποτιδόρπιον εἶη.
 ἔντοσθεν δ' ἄντροιο βαλὼν ὀρυμαγδὸν ἔθηκεν·
 ἡμεῖς δὲ δείσαντες ἀπεσσύμεθ' ἐς μυχὸν ἄντρου.
 αὐτὰρ ὃ γ' εἰς εὐρὺ σπέος ἤλασε πῖονα μῆλα,
 πάντα μάλ' ὅσσ' ἡμελγε, τὰ δ' ἄρσена λείπε θύρηφιν,
 ἀρνειοῖς τε τράγους τε, βαθείης ἔντοθεν αὐλῆς.

- (h) οἱ μὲν μοχλὸν ἐλόντες ἐλαΐνον, ὅξυν ἐπ' ἄκρῳ,
 ὀφθαλμῷ ἐνέρευσαν· ἐγὼ δ' ἐφύπερθεν ἀερθεῖς
 δίνεον, ὥς ὅτε τις τρυπῷ δόρυ νήϊον ἀνῆρ
 τρυπάνῳ, οἱ δὲ τ' ἔνερθεν ὑποσσεῖουσιν ἱμάντι
 ἀψάμενοι ἐκάτερθε, τὸ δὲ τρέχει ἐμμενὲς αἰεῖ·
- (i) ἦκε δ' ἀπορρήξας κορυφὴν ὄρεος μεγάλοιο,
 καδ δ' ἔβαλε προπάροιθε νεὸς κνανοπρόφοιο.
 [τυτθὸν ἐδεύησεν δ' οἰήϊον ἄκρον ἰκέσθαι.]
 ἐκλύσθη δὲ θάλασσα κατερχομένης ὑπὸ πέτρης·
 τὴν δ' αἰψ' ἠπειρόνδε παλιρρόθιον φέρε κῦμα,
 πλημυρὶς ἐκ πόντοιο, θέμωσε δὲ χέρσον ἰκέσθαι.
 αὐτὰρ ἐγὼ χεῖρεσσι λαβὼν περιμήκεα κοντὸν
 ὦσα παρέξ· ἐτάροισι δ' ἐποτρύνας ἐκέλευσα
 ἐμβαλέειν κώπης, ἵν' ὑπὲρ κακότητα φύγοιμεν,
 κρατὶ κατανεύων· οἱ δὲ προπεσόντες ἔρρεσσον.

2. Criticise the line of defence adopted by Socrates, and discuss his attitude throughout the trial.
3. Describe in detail the Homeric ship, and discuss any terms whose attribution is uncertain.
4. Translate from books not prescribed :—

- (a) Τὸν δ' ἀπαμειβόμενος προσέφη ξανθὸς Μενέλαος·
 ὦ πόποι, ἦ μάλα δὴ φίλου ἀνέρος υἱὸς ἐμὸν δῶ
 ἵκεθ', ὃς εἵνεκ' ἐμεῖο πολέας ἐμόγησεν ἀέθλους·

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καί μιν ἔφην ἔλθόντα φιλησέμεν ἔξοχον ἄλλων
 Ἀργείων εἰ νῶιν ὑπεῖρ ἅλα νόστον ἔδωκε
 νηυσὶ θοῇσι γενέσθαι Ὀλίμπιος εὐρύσπα Ζεὺς.
 καὶ κέ οἱ Ἀργεῖ δῶκα πόλιν καὶ δώματ' ἔτευξα,
 ἐξ Ἰθάκης ἀγαγὼν σὺν κτήμασι καὶ τέκεϊ ᾧ
 καὶ πᾶσιν λαοῖσι, μίαν πόλιν ἐξαλαπάξας
 αἱ περὶ ναιετάουσιν, ἀνάσσονται δ' ἐμοὶ αὐτῷ.

(b) "Attack on the Proposer of an Unconstitutional Law."

οὐ τοίνυν οὐδὲ ἐκείνός με, ᾧ ἄνδρες Ἀθηναῖοι, λέληθεν, ὅτι ἀπλῆν
 μὲν οὐδὲ δικαίαν οὐδ' ἡντινοῦν ἀπολογίαν Ἀριστοκράτης ἔξει
 λέγειν, παραγωγὰς δὲ τοιαύτας τινὰς ἐρεῖ, ὥς ἄρα πολλὰ
 τοιαῦτα ἤδη γέγονε ψηφίσματα πολλοῖς. ἔστι δ' οὐδὲν, ᾧ ἄνδρες
 Ἀθηναῖοι, τοῦτο σημεῖον τοῦ τοῦτον ἔννομα εἰρηκέναι. πολλαὶ
 γὰρ προφάσεις εἰσὶ, δι' αἷς πολλάκις ὑμεῖς ἐξηπάτησθε. Οἶον
 εἴ τι τῶν ἐαλωκότων ψηφισμάτων παρ' ὑμῖν μὴ ἐγράφη,¹
 κύριον ἂν δῆπουθεν ἦν· καὶ μὴν παρὰ τοὺς νόμους γ' ἂν εἴρητο.
 Καὶ εἴ τί γε γραφὴν ἢ καθυφέντων τῶν κατηγορῶν ἢ μὴ
 δυνηθέντων μηδὲν διδάξαι ἀπέφυγε, καὶ τοῦτο οὐδὲν κωλύει
 παράνομον εἶναι.

⁽¹⁾ γράφειν here technical : cf. the γραφή παρανόμων.

ANNUAL EXAMINATION,

GREEK COMPOSITION AND GRAMMAR.

Examiner: PROFESSOR TALBOT-TUBBS.

1. Translate into Greek :—

It was then that Alexander, having compelled the Persians on the left wing to seek safety in flight, wheeling about fell suddenly upon the flank of the Greeks, who, expecting no danger from that quarter, were still advancing and pushing the Macedonian phalanx back upon its camp. This attack upon troops who believed victory to be already theirs was all the more effective as it was unexpected; and Alexander using his opportunity well, threw the Greeks, after a short resistance, into utter confusion. Even so he must have lost many men before the victory was his, had not Darius himself despaired of success, and with craven timidity (*μαλακίζεσθαι*) set the example of flight. The Persian king, as soon as he saw his left wing broken and scattered, fearing for his own personal safety leaped upon his horse and fled across the plain.

2. General Grammar :—

(a) Set down *gen. sing. dat. plu.* (if adjective, all genders) of *θρίξ*, *εὖσεβής*, *ἐπιστήμων*, *ἦπαρ*, *βοῦς*, *γραῦς*, *χαρίεις*, *πέρας*; the *comparative* of *ἴδιος*, *κίων*, *αἰσχρός*, *βραδύς*, *φίλος*; the *chief tenses* and meaning of *στρέφω*, *ταράσσω*, *σφίω*, *νομίζω*, *προχωρῶ*, *διασπείρω*, *ἐπιβαίνω*, *τρέπω*.

(b) Conjugate in full the Imperf. Indic. Act. of *προσδοκάω* (contract forms only) *ἀπόλλυμι*, *ἀνθίστημι*, *δίδωμι*; 2nd Aor. Opt. Act. of *τρέχω*, *ἔημι*, *γινώσκω*; Prest. Imperat. Middle of *φαίνω*, *δηλόω*.

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(c) Give the chief rules of usage for Oratio Obliqua.

(d) Explain the construction in the following :—*ἔτεμον τῆς γῆς—ἔλαβον τῆς ζώνης τὸν πολέμιον—ἀλλ' αἰτήσω ἐκείνον τὸ βιβλίον—σὺ γ' ἡμαρτες τοῦ σκοποῦ—οἰκτεῖρω σε τῆς νόσου—πολλῶν οἱ πατέρες ἡμῶν μηδισμοῦ θάνατον κατέγνωσαν—δῆλόν ἐστι τοῦτο ἀφ' ὧν εἶρηκεν—φοβοῦμαι μὴ ἄρα ἐστὶν ἀληθές—τί μ' οὐκ ἔκτεινας, ἵνα ἐσφύζοντο οἱ ἄλλοι ;—ὄντινα ἴδοι μαλακίζόμενον, ἐκόλαζεν—εἴθε σοι, ὦ Περικλεῖς, τότε συνεγενόμην.*

3. Grammar of Prescribed Books :—

Parse fully—*φορέησι, δόσαν, γεγώνευν, βουλυτόνδε, ἀρώσιν, γεγάασι, ἡεῖδη, ἔρχατο.*

Give "Attic" for—*ὦς, ὄφρα, ἦμος, μίγεν, εἰς ὃ κε, εἶος, δειδίμεν :* and variant Homeric forms for Attic *μου, ἐν, πόλεως, ἡμᾶς, νέως, βίᾳ, ἦν.*

Discuss the words (meaning and formation) *ιερός, φίλος, ὀρεσκῶς, ταναύποδα, ποτιδόρπιον, λάχεια, ἦα.*

Discuss the construction of :—

(1.) *εἰπέ, ἵνα τοι δῶ ξείνιον, ᾧ κε σὺ χαίρης.*

(2.) *ἔντοσθεν δ' ἄντροιο βαλὼν. . . .*

(3.) *ἐπεὶ Κύκλωπα περὶ φρένας ἤλυθεν οἶνος.*

(4.) *σὺ γάρ, ὅσα γε τάνθρώπεια, ἐκτὸς εἰ. . . .*

(5.) *οὐκ ἂν ἔχοις ἐξελθὼν, ὃ τι χρῶς σαντῶ*

(6.) *οὐδὲν αὐτοὺς ἐπιλίεται ἢ ἡλικία τὸ μὴ οὐχὶ ἀγανακτεῖν.*

(7.) *καὶ οὕτως οἶει ἀπείρους γραμμάτων εἶναι, ὥστε οὐκ εἰδέναι ὅτι*

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4. Translate into Greek :—

He asked him who he was—Had he not been afraid, he would not have answered—He was considering how to escape—He did not know whether it was better to remain or to go away—He said he would do whatever he was ordered—The others are too wise to follow your advice—I have not the means wherewith to repay you—What arguments of mine would convince you?—Would that you had never come !

ANNUAL EXAMINATION.

ENGLISH LANGUAGE, &c.

Examiner: PROFESSOR EGERTON.

(N.B.—Those who have been attending lectures upon the course for Honours or Scholarships are requested to omit the first three questions and substitute those printed at the end of this paper.)

1. Translate:—

- (a) Tō-cwiesed hrēod hē ne forbrīētt, and smēocende fleax hē ne ādwæsc̃th ær thām the he āweorpe dōm tō sige.
- (b) Hīe fuhton on thā burg ealne dæg, ac hīe ne mihton hīe ābreca.
- (c) Lā, lēof, ne geseah ic nāfre thā burg, ne ic thone sēath nāt.
- (d) Fela wundra we gehiērdon on folclīce sprāce be thām hālgan Eadmunde, the wē hēr nyllath on gewrite settan, ac hīe wāt gehwā. On thissum hālgan is sweotol, and on swelcum ōthrum, thæt God ælmihtig mæg thone mann ārāran eft on dōmes dæge onsundne of eorþan, sē the hielt Eadmund hālne his lichaman oth thone miclan dæg, thēah he on moldan cōme.

2. Write in modern English:—

Now is Meede the Mayden I nomen & no mo of hem alle,
 With Beodeles and Baylyfs I brouht to the Kyng,
 The Kyng clepet a Clerke (I knowe not his nome)
 To take Meede the Mayden & Maken hire at ese
 Ichulle assayen hire myself & sothliche aposen
 What Mon in this world that hire weore leouest !

3. Of what Middle English dialects are the following forms characteristic:—cumen (past participle), ynome, cristny (vb.), gretand, nulich, sal, zuord, quer (= where), [summen] sais, heo. Give in each case a corresponding form belonging to another dialect.

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4. (a) Comment on the modern pronunciations of the modern forms of the following Early English words :— *næfre*, *blöd*, *göd*, *föd*, *nama*.
 (b) Write brief notes on the spellings—child, receive, chin, kin, can, love.
5. Briefly describe the state of the English language in Chaucer's time.
6. (a) What evidence is there for the date of Shakspeare's "Henry V"? What *internal* evidence is there in the three prescribed plays tending to prove that the two parts of "Henry IV." were written before "Henry V."
 (b) What did Shakspeare owe to the older play "The Famous Victories of Henry V."
7. When and in what company does the ancient Pistol first appear? Sketch his character and career. To what extent may he be drawn from life?
8. (a) Give the substance of Lamb's remarks on Malvolio.
 (b) Write a note upon Lamb's introduction of his personal friends into the "Essays of Elia."
9. Explain the following passages, stating in what connection they occur :—
 - (a).

Leave 'in sooth,'
 And such protest of pepper-gingerbread
 To velvet-guards and Sunday citizens.
 - (b) For womanhood, Maid Marian may be the deputy's wife of the ward to thee.
 - (c) I was never manned with an agate before.
 - (d)

The gum down-roping from their pale-dead eyes,
 And in their pale dull mouths the gimmel bit
 Lies foul with chewed grass, still and motionless.
 - (e) The parting Genius of beggary is "with sighing sent."
 - (f) Tibbs and Bobadil even when detected have more of our admiration than contempt.

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- (g) He had lost his good voice (like Sir John) "with hallooing and singing of anthems."

10. (To be answered briefly.)

- (a) Mention (1) six of the most poetic, (2) six of the most humorous passages in "Henry IV."
 (b) When was the feast of Crispian?
 (c) How does "Prince John of Lancaster" appear in "Henry V."?
 (d) What euphemisms does Falstaff find for the word "thief"?
 (e) Mention a few proverbial or popular sayings which occur in "Henry IV."
 (f) "We have a number of shadows to fill the muster-book."—Explain.
 (g) Prince Henry is recorded to have broken Falstaff's head. On what provocation?
 (h) In what connection is reference made to "Goodman Puff of Barson"?

The following questions are to be substituted for 1, 2, and 3, by those who have been attending lectures on the courses in English for Honours or Scholarships.)

- (a) Frige menn ne mōtan wealdan heora sylfra, ne faran thār hī willath, ne ātēon heora āgen swā hī willath; ne thrēlas ne mōton habban thæt hī āgon on āgenan hwīlan mid earfethan gewunnen.
- (b) For thon him gelyfeth lýt se the āh lifes wynn,
 gebideth in burgum bealositha hwōn,
 wlonc and wingāl, hū ic wērig oft
 in brimlāde bidan sceolde!
 Nāp nihtscua, northan sniwe,
 hrim hrusan band; hægsl fēoll on eorthan.
 corna caldast.

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- (c) Theo that habbeth feondes werk idon and therin beoth
 ifunde
 Heo shulle fare forth myd him into helle grunde.
 Ther ho schulle wunyen o buten ore and ende
 Ne breketh nouht crist eft helle dure to lesen heom of
 bende
 Nys no seollich theh heom beo wo ; he mawen wunyen
 ethe.

ANNUAL EXAMINATION.

ENGLISH LITERATURE.

Examiner: PROFESSOR EGERTON.

(At least one hour should be devoted to the Essay.)

1. Account for the great development of English Prose which took place in the reign of Queen Anne; classify the chief prose works, giving dates.
2. How does the poetry of Pope represent the spirit of his age? Illustrate your answer by reference to the "Essay on Criticism," "The Rape of the Lock," and "Windsor Forest."
3. Compare and contrast Addison and Steele as essayists. Illustrate your remarks by reference to their work.
4. Enumerate and exemplify the chief characteristics of Swift as a writer of prose satire.
5. Write a short note on the comedies of the reign of Queen Anne.
6. (a) "Gay had the journalist's instinct for what would pay." Exemplify.
(b) Exhibit your acquaintance with any poems of Queen Anne's reign which show a genuine feeling for nature.
7. (To be answered briefly).
 - (a) Mention the author and subject of each of the following:—"The Shortest Way with the Dissenters," "Alma," "Law is a Bottomless Pit," "The Hermit," "The Fair Penitent."
 - (b) In what connection do the following names occur:—Sempronius, Nic Frog, Isaac Bickerstaff, Moll White, Ned Softly, Nestor Ironside.

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(c) Fix the following quotations :—

- (i.) "The two noblest of things which are sweetness and light."
- (ii.) "How happy could I be with either."
- (iii.) "To err is human, to forgive divine."
- (iv.) "The woman that deliberates is lost."
- (v.) "Beauty draws us with a single hair."

ESSAY.

(Only one subject to be chosen.)

- (a) Shakspeare's Employment of the Comic Element in Henry IV.
- (b) The Family of Percy as represented by Shakspeare.
- (c) Lamb considered as a Critic and a Man of Letters.
- (d) The Personality of Lamb, as reflected in Elia.

PURE MATHEMATICS.

PAPER a.—GEOMETRY AND TRIGONOMETRY.

Examiner: PROFESSOR H. W. SEGAR, M.A.

N.B.—*For a Pass only, questions marked with an asterisk need not be attempted.*

I.

1. If two straight lines are respectively either parallel or perpendicular to two others, the angles between the first pair are respectively equal to the angles made by the second pair.
2. In every regular polygon there is a point such that all straight lines bisecting the angles, or bisecting the sides at right angles, pass through it, and this point is equidistant from all the angular points and equidistant from all the sides of the polygon.
3. ABC , $A'B'C'$ are two triangles such that $AB = A'B'$ and $AC = A'C'$, but BC is greater than $B'C'$. If O , O' be the middle points of BC , $B'C'$, then AO is less than $A'O'$.
4. If a chord of a circle be drawn from the point of contact of a tangent the angles it makes with the tangent are respectively equal to the angles in the alternate segments of the circle. Also state and prove the converse.
5. Two circles are described, each touching one side of a triangle, and the other two sides produced. Shew that a circle can be described passing through their centres and two of the angular points of the triangle.

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6. If two circles touch, their point of contact and their centres are collinear.
7. If a right-angled triangle have one of its sides containing the right angle double of the other, then the difference of the hypotenuse and the shorter side is equal to the internal medial segment.
 *The sum of the hypotenuse and the shorter side is equal to the external medial segment.
8. The four sides of any quadrilateral inscribed in a circle being given, the area does not depend upon the order in which the sides are placed in the circle.
9. The sides about the equal angles of triangles which are equi-angular to one another are proportionals ; and those which are opposite to the equal angles are homologous sides.
10. If ABC be an equilateral triangle, and P a point on the circum-circle on the side of BC remote from A, the square on PA is equal to the rectangle PB·PC, together with the square on BC.
11. Inscribe a regular pentagon in a given circle.
12. *If three circles touch one another, taken two and two, shew that their common tangents at the points of contact are concurrent.

II.

1. Shew that the circumference of a circle varies as its radius.
2. State and prove the relations between the circular functions of the two angles θ , $\theta - \frac{\pi}{2}$.
3. Write an account of the methods of solution of right-angled triangles.

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4. Prove the relations—

$$(i.) \sin 2A = 2 \sin A \cos A ;$$

$$(ii.) \frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c} = \frac{1}{2R} ;$$

$$(iii.) \log_a mn = \log_a m + \log_a n ;$$

$$(iv.) \sin \frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{bc}} .$$

5. Establish the relations—

$$(i.) \sin^{-1} \frac{2mn}{m^2 + n^2} + \sin^{-1} \frac{m^2 - n^2}{m^2 + n^2} = \frac{\pi}{2} ;$$

$$(ii.) \frac{\cot \frac{A}{2} + \cot \frac{B}{2} + \cot \frac{C}{2}}{\cot A + \cot B + \cot C} = \frac{(a+b+c)^2}{a^2 + b^2 + c^2} ;$$

and simplify the expression—

$$\frac{\sin A + \sin 3A + \sin 5A + \sin 7A}{\cos A + \cos 3A + \cos 5A + \cos 7A} .$$

6. If $a = 30$, $b = 10$, $C = 53^\circ 7' 48''$, find c , having given—

$$\log 2 = \cdot 3010300, \quad L \tan 63^\circ 26' 6'' = 10 \cdot 3009994,$$

$$\log 2 \cdot 5298 = \cdot 4030862, \quad L \sin 26^\circ 33' 54'' = 9 \cdot 6505142,$$

$$\log 2 \cdot 5299 = \cdot 4031034,$$

$$L \tan 51^\circ 32' = 10 \cdot 0999135, \quad \text{diff. } 2596,$$

$$L \cos 51^\circ 32' = 9 \cdot 7938317, \quad \text{diff. } 1590.$$

7. Solve the equation—

$$\sin 2\theta + \sqrt{3} \cos 2\theta = 1.$$

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8. *Eliminate θ and ϕ between the equations—

$$\frac{ax}{\cos \theta} - \frac{by}{\sin \theta} = a^2 - b^2, \quad \frac{ax}{\cos \phi} - \frac{by}{\sin \phi} = a^2 - b^2, \quad \theta - \phi = \frac{\pi}{2}.$$

9. *If ϕ be the angle between the diagonals of a quadrilateral ABCD, shew that its area is—

$$\frac{1}{4} (a^2 - b^2 + c^2 - d^2) \tan \phi.$$

10. *Six equal circles of radius r are placed so that each touches two others, their centres all being on the circumference of another circle. Find the area which they enclose.

PURE MATHEMATICS.

PAPER b.—ALGEBRA.

Examiner: PROFESSOR H. W. SEGAR, M.A.

N.B.—*For a Pass only, questions marked with an asterisk need not be attempted.*

1. (i.) Factorize $ax^2 + bx + c$, and discuss the nature of the factors.
- (ii.) Shew that if $\frac{a}{b} = \frac{c}{d} = \frac{e}{f} = \dots$, then each fraction is also equal to—

$$\left(\frac{pa^n + qc^n + re^n + \dots}{pb^n + qd^n + rf^n + \dots} \right)^{\frac{1}{n}}$$
- (iii.) Shew that a quadratic equation cannot have more than two roots.
- (iv.) Find the square root of $a + \sqrt{b}$.
- (v.) Shew that if x α y when z does not vary, and x α z when y does not vary, then x α yz when y, z both vary.
- (vi.) Find the number of permutations of n things taken all together, when the things are not all different.

2. Simplify—

$$(i.) \frac{c}{p^2 x^2} - \frac{1}{p^2 x} + \frac{p - c}{2p^2} \cdot \frac{1}{x - p} + \frac{p + c}{2p^2} \cdot \frac{1}{x + p};$$

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$$(ii.) \frac{a^2 \left(\frac{1}{b} - \frac{1}{c} \right) + b^2 \left(\frac{1}{c} - \frac{1}{a} \right) + c^2 \left(\frac{1}{a} - \frac{1}{b} \right)}{a \left(\frac{1}{b} - \frac{1}{c} \right) + b \left(\frac{1}{c} - \frac{1}{a} \right) + c \left(\frac{1}{a} - \frac{1}{b} \right)}.$$

3. Solve the equations—

$$(i.) xy + 6 = 3y + 2x, x + y = 5;$$

$$(ii.) \sqrt{a+x} + \sqrt{a-x} = \frac{12a}{5\sqrt{a+x}}.$$

4. A cistern can be filled by three pipes A, B, C. Twice as much water passes through B per minute as through A. The three when open together fill the cistern in one hour, and B alone will take one hour longer to fill it than C alone. Find the time in which each alone will fill the cistern.

5. Factorize—

$$(i.) abx^2 - (a+b)(ab+1)x + (ab+1)^2;$$

$$(ii.) (x^2 + x - 1)^3 - (y^2 + x - 1)^3.$$

6. Determine the limits between which the values of x must lie so that

$$\frac{6x^2 - 7x + 2}{2x^2 - 5x - 3}$$

may always be negative.

7. Simplify the expression—

$$a \sqrt{a} \sqrt{\{a \sqrt{[a \sqrt{(a \sqrt{a})}]}\}}.$$

8. Shew that if—

$$\frac{ay - bx}{c} = \frac{cx - az}{b} = \frac{bz - cy}{a}$$

then $x : a = y : b = z : c$.

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9. If an arithmetical, geometrical, and harmonical progression have the same first and second terms, and their third terms be a, b, c respectively, prove that

$$\left(\frac{a}{c} - 3\right)^2 + 4\left(\frac{a}{b} + \frac{b}{c}\right) = 12.$$

10. Find the greatest term in $(a + b)^n$ when $a = 2$, $b = 3$, and $n = 7$; and the eighth term in each of $(1 - x)^4$, and $(1 + x)^{-4}$.

11. *If

$$x^4 + px^3 + qx^2 + rx + 1 = 0 \text{ and } x^4 + rx^3 + qx^2 + px + 1 = 0$$

have a common root, shew that $p + r = q + 2$, the symbols being supposed essentially positive.

12. *If x, y, z be unequal, and if

$$2a - 3y = \frac{(z - x)^2}{y}, \text{ and } 2a - 3z = \frac{(x - y)^2}{z},$$

then will $2a - 3x = \frac{(y - z)^2}{x}$, and $x + y + z = a$.

- 13 *Prove that

$$\frac{1}{(1 - 2x)(1 - 2x + x^2)} = 1 + 4x + 11x^2 + \dots + (2^{n+2} - n - 3)x^n + \dots$$

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APPLIED MATHEMATICS.

Examiner: PROFESSOR H. W. SEGAR, M.A.

N.B.—*For a Pass only, questions marked with an asterisk need not be attempted.*

1. (a) Write down the fundamental formulæ for dealing with motion under constant acceleration. Assuming two of them, deduce the others.

- (b) A particle begins to fall from the highest point of a vertical circle down one of its chords; shew that the time it takes to again reach the circle, and the velocity acquired when it reaches the tangent at the lowest point, are both independent of the direction of the chord.

2. A shot of mass m is fired from a gun of mass M with a velocity u relative to the gun; shew that, if the mass of the powder be neglected, the actual velocity of the shot is—

$$\frac{M}{m + M} u, \text{ and that of the gun } \frac{mu}{m + M}.$$

3. If the unit of time be 5 minutes, and the unit of length 5 yards, find the value of g .

4. *Shew that if two particles of mass m and m' respectively be suspended by a string over a smooth pulley, the acceleration of their common centre of gravity is—

$$g \left(\frac{m - m'}{m + m'} \right)^2.$$

ANNUAL EXAMINATION.

5. (a) State and prove Lami's Theorem. State also the converse.
- (b) Find the resultant of two like parallel forces.
- (c) Prove the formula for giving the distance of the C.G. of a number of particles from a given straight line.
- (d) Shew that a system of forces in one plane are in equilibrium if the sum of their moments is zero about each of three points in the plane which are not in one straight line. State other sets of necessary and sufficient conditions for the equilibrium of a system of coplanar forces.
6. At what angle must the forces $A + B$ and $A - B$ act, in order that their resultant may be $\sqrt{A^2 + 3B^2}$?
7. A heavy uniform rod of length $2a$ rests partly within and partly without a smooth hemispherical bowl of radius r ; if θ be the inclination of the rod to the horizon, shew that

$$2r \cos 2\theta = a \cos \theta.$$

8. The beam of a common steelyard is 32 inches long, the body to be weighed being attached to one end A, and the fulcrum is distant 5 inches and the C.G. of the beam $7\frac{1}{2}$ inches from A. The weight of the beam being 1 lb., and that of the moveable weight $3\frac{1}{4}$ lbs., find the heaviest weight that can be weighed by the instrument.
9. *Three forces P, Q, R in one plane, act on a particle, the angles between R and Q, P and R, and P and Q being α , β , and γ respectively; prove that their resultant
- $$= \left\{ P^2 + Q^2 + R^2 + 2QR \cos \alpha + 2RP \cos \beta + 2PQ \cos \gamma \right\}^{\frac{1}{2}}.$$
10. *A body is resting on a rough inclined plane of inclination α , the angle of friction being ϕ which is greater than α . Shew

ANNUAL EXAMINATION.

that the ratio of the least force which will drag the body up the plane to the least force which will drag it down is

$$\sin(\phi + a) : \sin(\phi - a).$$

11. (a) Shew that the surface of separation between two fluids of different densities is a horizontal plane.

(b) Describe the Common Hydrometer, and shew that if a is the unimmersed portion of the stem when floating in water, and x, x' the length of the stem unimmersed when the hydrometer floats in liquids of specific gravities s, s' respectively, then

$$\frac{x' - a}{x - a} = \frac{1 - \frac{1}{s'}}{1 - \frac{1}{s}}.$$

- (c) Find the specific gravity of a mixture of substances of given weights and specific gravities.
12. A cylinder, 4 feet high and of 4 inches radius, is half filled with mercury and half with water. Find the total pressure on the curved surface, given that the sp. gr. of mercury is 13.5.
13. The cylinder and barrel of a common pump have the same sectional area. If the level of the water in the cylinder is raised through the same distance in each of the first two strokes of the piston, prove that the height of the water barometer is the arithmetic mean between the greatest and least distances of the piston from the surface of the water in the well.
14. *A uniform rod, of weight W , is loaded at one end with a weight P , of insignificant volume. If the rod float in an inclined position with $\frac{1}{n}$ th of its length out of the water, prove that $(n - 1)P = W$.

ANNUAL EXAMINATION.

15. *A parallelogram has its corners at depths h_1, h_2, h_3, h_4 below the surface of a liquid, and its centre at a depth h ; shew that the depth of its centre of pressure is

$$\frac{h_1^2 + h_2^2 + h_3^2 + h_4^2 + 8h^2}{12h}.$$

ANNUAL EXAMINATION.

CHEMISTRY.

Examiner: PROFESSOR BROWN.

1. What volume of chlorine, measured at 27°C . and 750mm. would result from the treatment of ten grams of manganese dioxide with hydrochloric acid?
 $\text{Mn} = 55.$ $\text{Cl} = 35.5.$
2. State the law of reciprocal proportions, and explain its meaning by the aid of examples.
3. How is nitrogen peroxide prepared? How would you ascertain the presence or absence of free oxygen in this gas?
4. Compare the physical and chemical properties of hydriodic acid with those of hydrochloric acid. How could you detect the presence of chloride in a sample of potassium iodide?
5. Give the names and formulae of important mineral substances containing fluorine. Describe the method by which the element fluorine has been obtained. What are the properties of this substance?
6. How is orthophosphoric acid related to pyrophosphoric and metaphosphoric acids respectively? Mention other instances of acids similarly related and give their formulae. How would you propose to prepare sodium pyrophosphate?
7. Give an account of the ammonia soda process for the manufacture of sodium carbonate.
8. Make a careful comparison of the elements silicon and tin, and of their respective compounds with other elements.

ANNUAL EXAMINATION.

9. What are the chief facts regarding the solubility of gases in water? Show that it is possible, by the application of the laws of solubility, to effect a separation of the oxygen and nitrogen of the atmosphere.
10. Write a brief account of the application of electrolysis to the extraction of the metals from their ores or other compounds.

ANNUAL EXAMINATION.

ADVANCED CHEMISTRY.

Examiner: PROFESSOR BROWN.

1. Explain fully how you would determine the vapour density of a substance by Victor Meyer's method. Give an account of the more important results which have been obtained by the use of this method at high temperatures.
2. The atomic weight of argon is approximately 40. Make a careful statement of the experimental data upon which this value is founded. Write down also what you know concerning the other recently discovered gases of the atmosphere.
3. Define atomic volume and give some account of Kopp's and of Schröder's observations of atomic volumes and of their deductions therefrom.
4. Give a brief description of the state of chemical knowledge in Priestley's time and mention his chief contributions to chemical science.
5. What is osmotic pressure? Indicate the arguments which have been used in support of the view that a dissolved substance distributed through a solvent behaves in much the same way as does a gas distributed in space.
6. State the laws of mass action and show how they may be embodied in equations. Show by means of such equations that, if a solid dissociates into a solid and a gas, there will, at any given temperature, be only one pressure of that gas at which equilibrium is possible, such pressure being independent of the relative quantities of the substances present.

MAGNETISM AND ELECTRICITY.

Examiner: PROFESSOR BROWN.

1. Define the term "moment" as applied to a magnet. Explain how the moments of two bar magnets may be compared.
2. In measuring the magnetic inclination with a dip circle, it is usual, after having taken readings, to rotate the instrument through 180° and to read again. Explain exactly the object of this proceeding.
3. If a sphere be charged with n electrostatic units of electricity, it is said that $4\pi n$ lines of force radiate from the sphere. Show that this statement is correct, and state the definitions or conventions upon which it is founded.
4. Define the term "capacity" and show that the capacity of a spherical condenser is inversely proportional to the thickness of the dielectric.
5. Describe the "replenisher" used in connection with Lord Kelvin's electrometers, and explain its action.
6. A wire is bent into a circle, the diameter of which is 20 cms., and a current of four amperes is sent through it. Find the strength of the magnetic field at the centre of the circle, and also the strength at a point 10 cms. from the centre on the perpendicular to the plane of the circle and passing through its centre.
7. A piece of German silver wire 1 metre long and having a resistance of 0.25 ohm. is stretched between two terminals.

ANNUAL EXAMINATION.

What change in the resistance between the terminals will be brought about by laying a circle of the same wire 50 cms. in diameter on the stretched wire so that the centre of the circle is on that wire?

8. A circular copper ring is rotated with constant angular velocity round one of its diameters in a uniform magnetic field whose lines of force are perpendicular to the axis of rotation. State exactly the effect of the field on the ring.

9. What do you understand by "thermoelectric power"? Explain how these powers are set forth in the thermoelectric diagram, and show that the electromotive force of any couple may be obtained from the diagram.

10. Explain the construction of a shunt wound dynamo, and give a general idea of the characteristic curve of such a machine.

ANNUAL EXAMINATION.

BIOLOGY.

Examiner: PROFESSOR A. P. W. THOMAS.

Medical Students may attempt questions in sections I., II. and IV., but must not take more than eight questions altogether, nor more than three in any one section.

All answers to be illustrated with diagrams wherever possible.

I.—GENERAL BIOLOGY.

1. Shew by the comparison of Spirogyra with Amoeba (*a*) the essential resemblances, (*b*) the chief differences, between an animal and a vegetable cell.
2. Give a short account of the chief tissues found in the vascular bundle of any flowering plant and state the mode of formation of the tissues, and the purposes attained by their differentiation.
3. Give an account of the blood and general arrangement of the organs of circulation in the Frog. What are the functions of the vascular system?
4. Give a brief outline of the theory of the origin of species by natural selection, and indicate the chief lines of evidence bearing on the theory.

II.—JUNIOR BOTANY.

A.

1. What is meant by transpiration in plants, and how does it take place? What is its importance? Show how the rate of transpiration under various conditions may be measured and compared.

ANNUAL EXAMINATION.

2. Give an account of the structure of the mature ovule in *Lilium* (or any flowering plant) and trace the process of fertilisation and formation of seed.
3. What is the general nature of the fruit in flowering plants? Describe modifications of various parts of the flower to ensure dispersal, quoting specific examples from natural orders with which you are familiar.
4. Explain the characters of the Orchidaceae, referring to any forms (to be named) which you have examined. In what general characters do they differ from the natural order to which the lily belongs? What is the biological significance of the special features of the Orchidaceae?

B.

For Students taking Junior Botany only.

5. Describe the character of the roots in any Dicotyledonous plant. What are the functions of the roots?
6. What are the special features of the Compositae, and what is their significance?
7. Describe various forms of flowers from the Rosaceae and show how they are related to one another. In what respects is there any similarity to the flowers of the Leguminosae?

III.—SENIOR BOTANY.

1. Describe the structure and life history of *Hormosira*. Comment on any features of special interest exhibited by *Hormosira*.
2. Describe the organs of reproduction in the Liver-wort, and trace the formation of the sporogonium. Compare briefly the sporogonium of *Marchantia* with the corresponding structures in the Moss and Fern respectively.

ANNUAL EXAMINATION.

3. Compare the sporophylls and sporangia of the Fern, Selaginella, and Lilium. Describe the formation of the sporangia in the latter.
4. Give a short account of the cambium of Pinus and the structures to which it gives rise.

IV.—ZOOLOGY.

1. Describe the excretory system in the earthworm. State briefly how far the excretory system in a Vertebrate (*a*) resembles that of the earthworm, (*b*) differs from it.
2. Compare the blood and organs of circulation in the Earthworm and Fish.
3. Describe the segmentation of the ovum in Amphioxus and the early stages of development.
4. Give an account of the embryonic membranes in the chick and their mode of formation. Describe the development of the nervous system in the same type.

ANNUAL EXAMINATION.

GEOLOGY.

Examiner: PROFESSOR A. P. W. THOMAS.

Illustrate your answers with diagrams wherever possible.

1. What minerals would you expect to find in a section of basalt under the microscope, and how may they be arranged? Give the usual crystalline form and degree of symmetry of the minerals you mention.
2. A section through a certain country shows the following in order:—(a) Nearly vertical strata of hard sandstone and slate; (b) a series 50 feet thick of shale with plant impressions and thin seam of coal; (c) a series of shale and sandstone 150 feet thick with *Turritella* and *Venus*; (d) a limestone 100 feet thick with *Pecten* and *Terebratula*; (e) a series of soft sandstones. The beds *b*—*e* dip at angles varying from 20° to 30°. Draw the section and say how you would interpret it.
3. Draw diagrams to illustrate the following:—Trough-fault, overthrust, isoclinal structure, overlap. Explain how the appearances shown in your section have been produced.
4. Distinguish between contact metamorphism and dynamic metamorphism, and give examples of alteration of rocks effected by them respectively. In what regions is dynamic metamorphism most marked?
5. What is meant by a zone in stratigraphical geology, and what is the importance of zones? What groups of fossils have been found specially valuable for the purpose of zone classification?
6. Give some account of the Vertebrate fauna of the Jurassic system of rocks.

ANNUAL EXAMINATION.

7. Give some account of the rocks usually grouped as the Maitai system in New Zealand. Show their distribution and state what evidence we have as to their geological age.
8. Give a brief account of the following organisms, stating their systematic position, and the rocks in which they occur:—
Calamites, Nummulites, Calymene, Baculites, Orthoceras, Olenellus, Orthis, Pterophyllum, Osteolepis.

SCHOOL OF MUSIC (ADVANCED DIVISION)

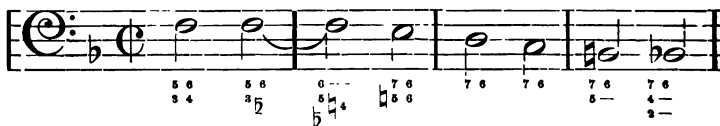
Examiner: DR. W. E. THOMAS.

Time allowed : Three Hours.

1. Modulate from C to A \flat major, and from F \sharp mi. to C mi.
2. State the difference between Sonata and Rondo Forms ; write the melody of a second subject in the former, and a first subject in the latter.
3. Harmonize for two violins and 'cello, making four-part harmony ; the parts must be flowing :—



4. Harmonize in four parts :—



1.

ANNUAL EXAMINATION.



5. Write a Canon in two parts on a pedal throughout, beginning thus :—



6. Answer the following Fugue subjects tonally, and write an exposition in four parts of the last one :—



li.

ANNUAL EXAMINATION.



7. Add four parts, in the first species, to the following C.F. (Alto and Tenor clefs must be used).



8. Add a first species, and a Canto Fermo, to the following fourth species :—



ANNUAL EXAMINATION.

9. Give a brief account of the state of music between 1300 and 1600.
10. What do you know of Festa and Bull?
11. Compare the two greatest composers of the 16th Century.

ANNUAL EXAMINATION.

SCHOOL OF MUSIC (INTERMEDIATE DIVISION).

Examiner: DR. W. E. THOMAS.

Time allowed: Three Hours.

1. Explain False Relation, Tierce de Picardie, and Enharmonic Change.
2. Give a brief outline of Sonata Form ; and give an example of a 1st subject from any classical composer you know (the melody only need be given).
3. Harmonize the following Melody in four parts :—



4. Harmonize in four parts :—



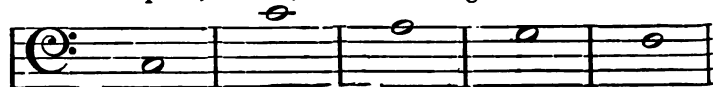
ANNUAL EXAMINATION.



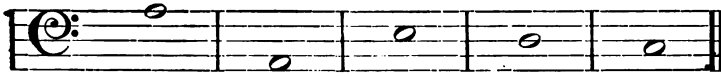
5. Transpose into C mi., and place in Treble, Alto, Tenor, and Bass clefs :



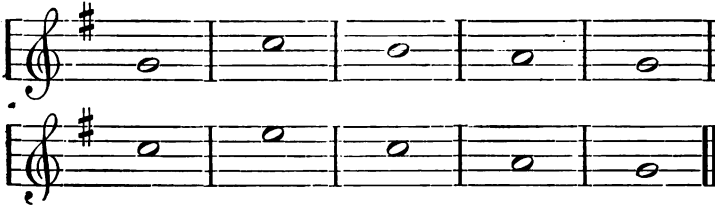
6. Add two parts, n. a. n., to the following C.F. :—



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7. Add a third species to the following C.F. :—



8. Give a brief sketch of the earliest known work on Counterpoint.

9. State what you know of Lassus, Monteverde, and John of Fornsete.

10. Write a Canon in two parts, starting thus :—



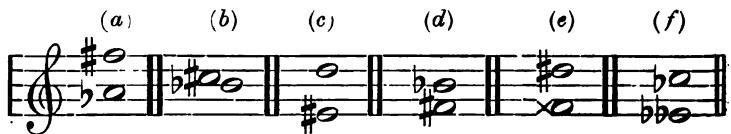
ANNUAL EXAMINATION.

SCHOOL OF MUSIC (JUNIOR DIVISION).

Examiner: DR. W. E. THOMAS.

Time allowed: Three Hours.

1. Give the Scale of C \sharp minor ascending, melodic form ; and the Scale of D \flat minor descending, harmonic form.
2. Name the following intervals, and state what they become when inverted :—



3. Write out in full :—



ANNUAL EXAMINATION.

4. Transpose a whole tone higher :—



5. Harmonize the following melody in four parts :—

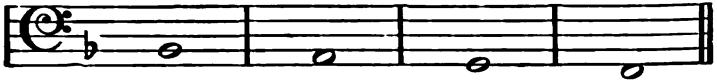


6. Harmonize in four parts :—



ANNUAL EXAMINATION.

7. Add a first species to the following C.F., using the alto clef :—



8. Add a fourth species to the following, in the tenor clef :—



9. What services did the following composers render to music :—
Josquin, Dunstable, Willaert ?

10. Give a brief sketch of Franco and Tallis's work.

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ANNUAL EXAMINATION.

SCHOOL OF MUSIC.

ACOUSTICS.

Examiner: PROFESSOR BROWN.

1. Distinguish between a noise and a musical note, and between the pitch and loudness of a note.
2. Describe the passage of a sound wave through the air, and explain why such a wave travels faster in a light gas such as hydrogen than in air.
3. A glass jar is 12.9 inches high; what will be the vibration number of the note to which it will resound?
4. How does the vibration of a string depend upon its tension? A string passing over the bridges of a sonometer and stretched with a weight of 16 pounds, has a fundamental note of 256 vibrations per second. What must be the stretching weight of another and similar string in order that the two, when sounded together, may give nine beats per second?
5. Define the following musical intervals; major tone, minor tone, major third, minor third, fifth.
6. What is meant by temperament in music? Explain the system of equal temperament.

L

ANNUAL EXAMINATION.

THEORY (SENIOR GRADE).

1. Harmonize in four parts, using C clefs for alto and tenor :—[25]

The first system of the musical score for 'The Rose Tree' is written on a single staff in C major, 3/2 time. It begins with a treble clef, a key signature of one sharp (F#), and a 3/2 time signature. The melody consists of the following notes: C4 (quarter), D4 (quarter), E4 (quarter), F#4 (quarter), G4 (half). Below the staff, the lyrics 'The Rose Tree' are written in a stylized, decorative font. The first measure is aligned under 'The', the second under 'Rose', the third under 'Tree', and the fourth under 'The'. The fifth measure is aligned under 'Rose'.

2. Harmonize in four parts :— [25]

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ANNUAL EXAMINATION.

3. Add a counterpoint of the 1st species below this C.F. in tenor clef:— [10]



4. Add a counterpoint in the 4th species above this C.F. in the alto clef:— [15]



5. Give all the signs you can which indicate legato and staccato playing. [10]
6. Name, resolve, and figure the following chords:— [15]



N.B.—Answers to these questions must not be written on this paper, but on the paper provided for the purpose.

[Figures in brackets refer to the marks obtainable for each question.]

lxii.

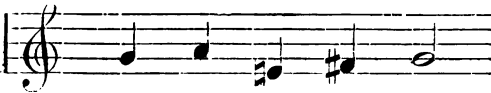
ANNUAL EXAMINATION.

SCHOOL OF MUSIC.

THEORY (INTERMEDIATE GRADE).

Time allowed: Three hours.

1. Add Time Signature, Bars, and state Key of the following:—[10]



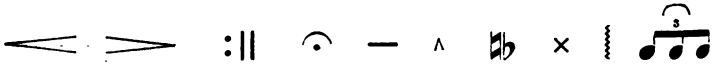
ANNUAL EXAMINATION.

2. Transpose the following into C major :— [15]

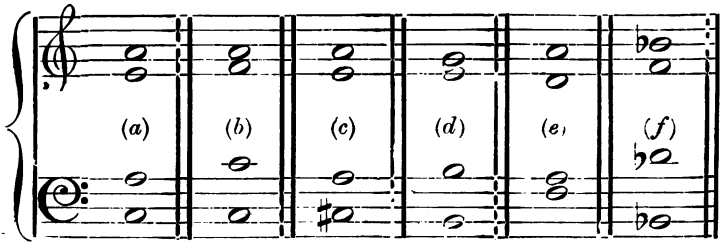
3. What is Syncopation? Give an example. [10]
4. Give the meanings of the following words:—*Ad libitum*, *larghetto*, *con moto*, *a piacere*, and *accelerando*. [10]
5. Write the scale of G \flat major in the alto clef ascending; and the scale of C \sharp minor in the tenor clef descending. [15]
6. Write the chromatic scale of G, ascending and descending. [10]

ANNUAL EXAMINATION.

7. Explain the following signs :— [15]



8. Name the following chords, and figure where necessary :— [15]



N.B.—Answers to these questions must not be written on this paper, but on the paper provided for the purpose.

[Figures in brackets refer to the marks obtainable for each question.]

ANNUAL EXAMINATION.

SCHOOL OF MUSIC.

THEORY (JUNIOR GRADE).

Time allowed : One and a-half hours.

1. Write the harmonic minor scale of G ascending, and the chromatic scale of D ascending and descending. [10]
2. What are the key signatures of E \flat major and E \flat minor. [10]
3. Add rests to fill in the following bars :— [20]

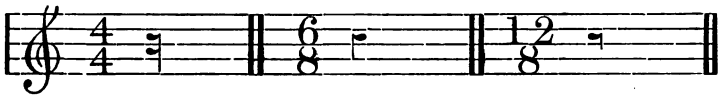


4. Place an octave lower, in the bass clef :— [15]



ANNUAL EXAMINATION.

5. Explain the following times :— $\frac{3}{2}$, $\frac{3}{8}$, $\frac{9}{8}$, $\frac{12}{4}$, $\frac{4}{2}$. [7]
6. Give meanings of the following words :—*Ad libitum*, *sforzando*, *rinforzando*, *calando*, *morendo*. [8]
7. Add notes to fill in the following bars :— [20]



8. Write a list of all the rests you know, naming each one. [10]

N.B. Answers to the questions must not be written on this paper, but on the paper provided for the purpose.

[Figures in brackets refer to the marks obtainable for each question].

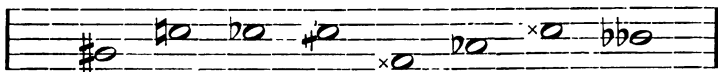
ANNUAL EXAMINATION.

SCHOOL OF MUSIC.

THEORY (PRIMARY GRADE).

Time allowed: One and a-half hours.

1. Place the treble clef before the following notes and name them:— [15]



2. Write the scale of F major on the bass stave: name each note. [10]
3. What note is equal to eight semiquavers? and say how many semiquavers there are in a dotted crotchet. [15]
4. What two notes of equal value are together worth the whole of the following:— [15]



5. Give the meanings of the following words:—*Presto, rallentando, largo, mezzo forte, piano, diminuendo.* [10]

ANNUAL EXAMINATION.

6. Give Italian words for —very slow, very quick, gradually slower, dying away. [10]
7. What is the use of a double sharp and a double flat? [10]
8. State what times the following denote :— $\frac{6}{8}$, $\frac{2}{4}$, $\frac{9}{8}$. [15]

N.B.—Answers to the questions must not be written on this paper, but on the paper provided for the purpose

[Figures in brackets refer to the marks obtainable for each question.]

FRENCH.

Examiner: MAXWELL WALKER, M.A.

PAPER A.

A.

Translate:—

CHARITY OF PARIS DURING THE SIEGE.

The inhabitants of the left bank of the Seine are now crowding to the right bank, and all are lending themselves cheerfully to help these southerners out of their difficulties. The charity of Paris is boundless. I had no idea till this winter what a kind-hearted people these French are. We have an idea in England that they are frivolous and heartless, and that their kindly manners do not reach below the surface. You should see their self-sacrifice, their almsgiving, their good-heartedness, their boundless liberality. The misery of the poor is very great; but it brings out all the finer qualities of French nature, showing how those who have nothing can suffer with heroism, and how those who have to spare will give what they have most generously. Whatever the result of the siege may be, whether Paris may be saved or captured, she will come out of the fiery furnace ennobled and purified with a sense of greatness which even defeat cannot destroy, and with a human feeling which will assure to her, and regain for her, what under the sway of Napoleon she had nearly lost, the empire of the heart. It is perhaps difficult, in the moment when she is down-trodden, to imagine such victory growing out of defeat; but it is not the first time in the history of the world, that out of death and decay have sprung life, resurrection, and victory.

(*War Correspondence of the "Daily News."*)

Translate :—

1. LE CHEMIN CREUX.

Le long d'un chemin creux que nul arbre n'égaie,
Un grand champ de blé mûr, plein de soleil, s'endort,
Et le haut du talus, couronné d'une haie,
Est comme un ruban vert qui tient des cheveux d'or.

De la haie au chemin tombe une pente herbeuse
Que la taupe soulève en sommets inégaux,
Et que les grillons noirs à la chanson verbeuse
Font pétiller de leurs monotones échos.

Passe un insecte bleu vibrant dans la lumière,
Et le lézard s'éveille et file, étincelant,
Et près des flaques d'eau qui luisent dans l'ornière
La grenouille coasse un chant rauque en râlant.

Le chemin est très loin du bourg et des grand'routes.
Comme il est mal commode, on ne s'y risque pas,
Et du matin au soir les heures passent toutes
Sans qu'on voie un visage ou qu'on entende un pas.

C'est là, le front couvert par une épine blanche,
Au murmure endormeur des champs silencieux,
Sous cette urne de paix dont la liqueur s'épanche
Comme un vin de soleil dans le saphir des cieux,

C'est là que vient le gueux, en bête poursuivie,
Parmi l'âcre senteur des herbes et des blés,
Baigner son corps poudreux et rajeunir sa vie
Dans le repos brûlant de ses sens accablés.

Et quand il dort, le noir vagabond, le maroufle
Aux souliers éculés, aux haillons dégoûtants,
Comme une mère emue et qui retient son souffle
La nature se tait pour qu'il dorme longtemps.

JEAN RICHEPIN : " La Chanson des Gueux."

ANNUAL EXAMINATION.

2. D'où vient que l'on rit si librement au théâtre, et que l'on a honte d'y pleurer? Est-il moins dans la nature de s'attendrir sur le pitoyable que d'éclater sur le ridicule? Est-ce l'altération des traits qui nous retient? Elle est plus grande dans un ris immodéré que dans la plus amère douleur, et l'on détourne son visage pour rire comme pour pleurer en la présence des grands et de tous ceux que l'on respecte. Est-ce une peine que l'on sent à laisser voir que l'on est tendre, et à marquer quelque foiblesse, surtout en un sujet faux, et dont il semble que l'on soit la dupe? Mais, sans citer les personnes graves ou les esprits forts qui trouvent du faible dans un ris excessif comme dans les pleurs, et qui se les défendent également, qu'attend-on d'une scène tragique? qu'elle fasse rire? Et d'ailleurs la vérité n'y règne-t-elle pas aussi vivement par ses images que dans le comique? L'âme ne va-t-elle pas jusqu'au vrai dans l'un et l'autre genre avant que de s'émouvoir? est-elle même si aisée à contenter? ne lui faut-il pas encore le vraisemblable? Comme donc ce n'est point une chose bizarre d'entendre s'élever de tout un amphithéâtre un ris universel sur quelque endroit d'une comédie, et que cela suppose au contraire qu'il est plaisant et très-naïvement exécuté, aussi l'extrême violence que chacun se fait à contraindre ses larmes, et le mauvais ris dont on veut les couvrir, prouvent clairement que l'effet naturel du grand tragique serait de pleurer tous franchement et de concert à la vue l'un de l'autre, et sans autre embarras que d'essuyer ses larmes: outre qu'après être convenu de s'y abandonner on éprouveroit encore qu'il y a souvent moins lieu de craindre de pleurer au théâtre que de s'y morfondre.

(La Bruyère, "Les Caractères.")

Write a note on *éprouveroit*.

C.

1. Sketch the course of the French language during the Seventeenth Century.
2. Compare English with French as to the use of the definite article.
3. Discuss the question of the position of adjectives in French.

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4. State what you know about the plural of compound nouns.

Give the plural of : *gaz, landau, bleu, carnaval, bijou, clou, oeil, oui, appui-main, entr'acte, gentilhomme, rouge-gorge, post-scriptum, ail, détail, émail*. When do *vingt* and *cent* take the plural inflection? Distinguish between the meanings of singular and plural of *aboi, ciseau, être, gage, lumière, vacance*.

5. Give the *third person (singular and plural)* of the *imperfect indicative, preterite, and imperfect subjunctive* of *créer, battre, coudre, croître, devoir, plaire, rompre, venir*; and the *first person (singular and plural)* of the *future indicative and present subjunctive* of *savoir, falloir, courir, oublier*.

6. How did *-ment* come to be the adverbial suffix in French? Illustrate the different ways of translating *how* and *so*.

7. Comment on the following sentences, correcting where necessary :—

(a) Elle est tout surprise.

(b) Ce fils est utile et chéri de sa mère.

(c) Qu'il parle et l'on l'écouterà.

(d) Il est passé en Angleterre la semaine dernière.

(e) Les soldats d'Alexandre oubliants leur patrie ne songeaient qu'au butin.

(f) Je les ai entendu chanter à Paris.

(g) Une tuile tombait sur sa tête et le tuait.

ANNUAL EXAMINATION.

FRENCH.

Examiner: MAXWELL WALKER, M.A.

PAPER B.

A.

1. Translate, with explanatory notes :—

- (a) Ce n'est pas qu'en effet contre mon père et moi
 Ma flamme assez longtemps n'ait combattu pour toi ;
 Juge de son pouvoir : dans une telle offense
 J'ai pu délibérer si j'en prendrais vengeance.
 Réduit à te déplaire, ou souffrir un affront,
 J'ai pensé qu'à son tour mon bras était trop prompt,
 Je me suis accusé de trop de violence ;
 Et ta beauté, sans doute, emportoit la balance,
 A moins que d'opposer à tes plus forts appas
 Qu'un homme sans honneur ne te méritoit pas ;
 Que malgré cette part que j'avois en ton âme,
 Qui m'aima généreux me haïroit infâme ;
 Qu'écouter ton amour, obéir à sa voix,
 C'étoit m'en rendre indigne et diffamer ton choix.
 Je te le dis encore, et, quoique j'en soupire,
 Jusqu'au dernier soupir je veux bien le redire ;
 Je t'ai fait une offense, et j'ai dû m'y porter
 Pour effacer ma honte et pour te mériter ;
 Mais, quitte envers l'honneur, et quitte envers mon père,
 C'est maintenant à toi que je viens satisfaire :
 C'est pour t'offrir mon sang qu'en ce lieu tu me vois.
 J'ai fait ce que j'ai dû, je fais ce que je dois.
 Je sais qu'un père mort t'arme contre mon crime ;
 Je ne t'ai pas voulu dérober ta victime :

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Immoie avec courage au sang qu'il a perdu
Celui qui met sa gloire à l'avoir répandu.

- (b) Je souffre cependant un tourment incroyable.
Jusques à cet hymen Rodrigue m'est aimable :
Je travaille à le perdre, et le perds à regret ;
Et de là prend son cours mon déplaisir secret.
Cet hymen m'est fatal, je le crains et souhaite :
Je n'ose en espérer qu'une joie imparfaite.
Ma gloire et mon amour ont pour moi tant d'appas,
Que je meurs s'il s'achève ou ne s'achève pas.
- (c) Quoi ! mon père étant mort et presque entre mes bras,
Son sang criera vengeance et je ne l'orrai pas !
- (d) Elle va revenir ; elle vient, je la voi :
Du moins, pour son honneur, Rodrigue, cache-toi.

2. In what sense are the following words used by Corneille :
courage, ennui, effet, race, heur, intérêt, succès, vertu, généreux,
ensemble, croître, gêner, comme ? Discuss his use of prepositions.

3. To what extent is Corneille indebted in *Le Cid* to his
Spanish original ? Quote passages showing similarity of style.

B.

1. Translate, with notes :—

- (a) Et, comme l'autre jour un docteur dit fort bien,
C'est véritablement la tour de Babylone,
Car chacun y babille, et tout du long de l'aune.
- (b) Oh ! vraiment, tout cela n'est rien au prix du fils,
Et, si vous l'aviez vu, vous diriez : " C'est bien pis !"
Nos troubles l'avoient mis sur le pied d'homme sage,
Et, pour servir son prince, il montra du courage.

Scan these lines.

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- (c) Mon Dieu ! laissons là le mérite ;
J'en ai fort peu, sans doute, et vous en faites foi.
Mais j'espère aux bontés qu'une autre aura pour moi ;
Et j'en sais de qui l'âme, à ma retraite ouverte,
Consentira sans honte à réparer ma perte.

Explain the context.

- (d) Je sais que vous avez trop de bénignité,
Et que vous ferez grâce à ma témérité ;
Que vous m'excuserez, sur l'humaine faiblesse,
Des violens transports d'un amour qui vous blesse,
Et considérerez, en regardant votre air,
Que l'on n'est pas aveugle, et qu'un homme est de chair.

- (e) Vous me feriez damner, ma mère. Je vous di
Que j'ai vu de mes yeux un crime si hardi.

2. Derive : *bru, chape, même, ailleurs, céans, sévrer, fourvoyer, faquin, vaurien.*
3. Explain : *la cour du roi Pétaud ; grand'mère ; pied-plat ; devots de place ; un bourru fieffé ; fagotin ; huissier à verge ; on vous aura forgé cent sots contes de lui.*
4. What main classes of people does Molière attack in his comedies ?
Quote names of plays and characters to prove your statements.

C.

1. Translate :—

- (a) Le style n'est que l'ordre et le mouvement qu'on met dans ses pensées. Si on les enchaîne étroitement, si on les serre, le style devient ferme, nerveux et concis ; si on les laisse se succéder lentement, et ne se joindre qu'à la faveur des mots, quelque élégants qu'ils soient, le style sera diffus, lâche et traînant.

- (b) Pourquoi les ouvrages de la nature sont-ils si parfaits ?
c'est que chaque ouvrage est un tout, et qu'elle travaille

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sur un plan éternel dont elle ne s'écarte jamais, elle prépare en silence les germes de ses productions ; elle ébauche par un acte unique la forme primitive de tout être vivant ; elle la développe, elle la perfectionne par un mouvement continu et dans un temps prescrit. L'ouvrage étonne ; mais c'est l'empreinte divine dont il porte les traits qui doit nous frapper. L'esprit humain ne peut rien créer ; il ne produira qu'après avoir été fécondé par l'expérience et la méditation ; ses connaissances sont les germes des ses productions : mais, s'il imite la nature dans sa marche et dans son travail, s'il s'élève par la contemplation aux vérités les plus sublimes, s'il les réunit, s'il les enchaîne, s'il en forme un tout, un système par la reflexion, il établira sur des fondements inébranlables des monuments immortels.

2. Criticise the following :—

- (a) Plus on mettra de cet esprit mince et brillant dans un écrit, moins il aura de nerf, de lumière, de chaleur et de style ; *à moins que cet esprit ne soit lui-même le fond du sujet, et que l'écrivain n'ait pas eu d'autre objet que la plaisanterie : alors l'art de dire de petites choses devient peut-être plus difficile que l'art d'en dire de grandes.*
- (b) A cette première règle, dictée par le génie, si l'on joint de la délicatesse et du goût, du scrupule sur le choix des expressions, *de l'attention à ne nommer les choses que par les termes les plus généraux*, le style aura de la noblesse.

3. What form did etiquette prescribe for the Discours à l'Académie ? When, and by whom, was the custom of treating a literary question introduced ?

4. Estimate briefly Buffon's position in French literature.

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D.

Give the context of *eight* of the following :—

1. Pour grands que soient les rois, ils sont ce que nous sommes
2. Le style est l'homme.
3. Qui ne craint point la mort ne craint point les menaces.
4. N'est-il pas d'un chrétien de pardonner l'offense,
Et d'éteindre en son cœur tout désir de vengeance.
5. Les hommes valeureux le sont du premier coup.
6. Ah ! mon frère, une femme
Aisément d'un mari peut bien surprendre l'âme.
7. Je veux une vertu qui ne soit point diablesse.
8. Je dois tout à mon père avant qu'à ma maîtresse.
9. Le chemin est long du projet à la chose.
10. Que de maux et de pleurs nous coûteront nos pères.
11. Il est de faux dévots ainsi que de faux braves.

E.

1. Name the authors of the following works : *L'art poétique, Mémoires de Grammont, Phèdre, La Princesse de Clèves, Télémaque, Histoire amoureuse des Gaules, Dictionnaire historique et critique, Maximes, Dialogues des Morts, La Recherche de la Vérité.*

Write a short notice of any one of them.

2. Fix the following quotations :—

(a) Si j'écris quatre mots, j'en effacerai trois.

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- (b) Vous pouvez maintenant recevoir La Fontaine. Il a promis d'être sage.
 - (c) Malebranche c'est Descartes qui s'égare.
 - (d) Je crains Dieu, cher Abner, et n'ai point d'autre crainte.
 - (e) Le plaisir de la critique nous ôte celui d'être vivement touché de très-belles choses.
 - (f) Il y a dans la jalousie plus d'amour-propre que d'amour.
 - (g) Que diable est-ce là ? ils n'ont rien que les grands seigneurs à me reprocher, et moi, je ne vois rien de si beau que de hanter les grands seigneurs.
 - (h) Les anciens ne se sont pas contentés de peindre simplement d'après nature, ils ont joint la passion à la vérité.
3. Give some account of the origin and growth of the French Academy, *or*, an account of the dispute of the ancients and moderns.
 4. Describe the state of the novel, *or* of memoir-writing, in France, during the 17th century.
 5. State what you know about La Bruyère.
 6. Give a brief account of the life and works of La Fontaine.

ANNUAL EXAMINATION.

GERMAN.

Examiner: MAXWELL WALKER, M.A.

PAPER A.

A.

Translate:—

1. Mr. Carlyle has quoted with some approval a pert phrase, that readers till their twenty-fifth year usually prefer Schiller, after their twenty-fifth year Goethe. If Herder and Novalis are right in their belief that the true elements of wisdom and poetry are found freshest and purest in the young, this is no disparagement to Schiller. It is, certainly, only in proportion as the glow for all that is noble in thought and heroic in character fades from the weaker order of mind, amidst the cavils, disgusts and scepticism of later life, that the halo around the genius of Schiller, which is but a reflection of all that is noble and heroic, wanes also into feebler lustre. For the stronger nature, which still "feels as the enthusiast, while it learns to see as the world-wise," there is no conceivable reason why Schiller should charm less in maturity than youth. Goethe may please a reader more in proportion as his mind can embrace a wider circumference in life; but, unless his mind loses in elevation what it gains in expansion, his eye will still turn with as fond a worship to the lofty star, which is not less holy than the sunlight, though it less fills the atmosphere immediately around us. May I be permitted to add that I am ten years older than I was when I began the study of Schiller? Since then I have investigated, with some critical care, the characteristics of those poets whom the world ranks among its greatest, and my admiration for Schiller is more profound and reverential than ever.

BULWER: *Life of Schiller.*

2. (a) The boy has swum across the river.

(b) He has been swimming for a quarter of an hour.

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- (c) There are nests of birds which are eatable.
- (d) I did not see him but I wrote to him.
- (e) Charles broke his leg this morning.
- (f) The art of wrestling is very old.

Write short notes justifying your choice of words or constructions.

B.

Translate :—

1.

DER PHÖNIX.

Es kommt ein Vogel geflogen aus Westen,
Er fliegt gen Osten,
Nach der östlichen Gartenheimat,
Wo Spezereien dulten und wachsen,
Und Palmen rauschen und Brunnen kühlen—
Und fliegend singt der Wandervogel :

“Sie liebt ihn ! sie liebt ihn !
Sie trägt sein Bildnis im kleinen Herzen,
Und trägt es süß und heinlich verborgen,
Und weiss es selbst nicht !
Aber im Traume steht er vor ihr,
Sie bittet und weint und küsst seine Hände,
Und ruft seinen Namen,
Und rufend erwacht sie und liegt erschrocken,
Und reibt sich verwundert die schönen Augen—
Sie liebt ihn, sie liebt ihn !”

An den Mastbaum gelehnt, auf dem hohen Verdeck,
Stand ich und hört' ich des Vogels Gesang.
Wie schwarzgrüne Rosse mit silbernen Mähnen,
Sprangen die weissgekräuselten Wellen ;
Wie Schwänenzüge schifften vorüber
Mit schimmernden Segeln die Helgolander,
Die kecken Nomaden der Nordsee !
Über mir, in dem ewigen Blau
Flatterte weisses Gewölk
Und prangte die ewige Sonne,
Die Rose des Himmels, die feuerblühende,

ANNUAL EXAMINATION.

Die freudvoll im Meer sich bespiegelte.
 Und Himmel und Meer und mein eigenes Herz
 Ertönten im Nachhall:
 Sie liebt ihn! sie liebt ihn!

HEINE.

2. Mustapha gab sich einer dumpfen Verzweiflung hin; der Fluch seines Vaters schien schon jetzt an dem Unglücklichen in Erfüllung zu gehen, und wie konnte er hoffen, seine Schwester und Zoraiden zu retten, wenn er, aller Mittel beraubt, nur sein ärmliches Leben zu ihrer Befreiung aufwenden konnte. Mustapha und seine stummen Begleiter mochten wohl eine Stunde geritten sein, als sie in ein kleines Seitenthal einbogen. Das Thälchen war von hohen Bäumen eingefasst, ein weicher dunkelgrüner Rasen, ein Bach, der schnell durch seine Mitte hinrollte, luden zur Ruhe ein, Wirklich sah er auch fünfzehn bis zwanzig Zelte dort aufgeschlagen; an den Pflöcken der Zelte waren Kameele und schöne Pferde angebunden, aus einem der Zelte hervor tönte die lustige Weise einer Zither und zweier schöner Männerstimmen. Meinem Bruder schien es, als ob Leute, die ein so fröhliches Lagerplätzchen sich erwählt hatten, nichts Böses gegen ihn im Sinne haben könnten, und er folgte also ohne Bangigkeit dem Ruf seiner Führer, die, als sie seine Bande gelöst hatten ihm winkten abzusteigen. Man führte ihn in ein Zelt, das grösser als die übrigen und im Innern hübsch, fast zierlich aufgeputzt war. Prachtige, goldgestickte Polster, gewirkte Fuszteppiche, übergoldete Rauchpfannen hätten anderswo Reichthum und Wohlleben verrathen, hier schienen sie nur kühner Raub. Auf einem der Polster sass ein alter, kleiner Mann; sein Gesicht war hässlich, seine Haut schwarzbraun und glänzend, und ein widriger Zug von tückischer Schlauheit um Augen und Mund machte seinen Anblick verhasst. Obgleich sich dieser Mann einiges Ansehen zu geben suchte, so merkte doch Mustapha bald, dass nicht für ihn das Zelt so reich geschmückt sei, und die Uterredung seiner Führer schien seine Bemerkung zu bestätigen. "Wo ist der Starke?" fragten sie den Kleinen. "Er ist auf der kleinen Jagd," antwortete jener; "aber er hat mir aufgetragen, seine Stelle zu verstehen." "Das hat er nicht gescheit gemacht," entgegnete einer der Räuber "denn es muss sich bald entscheiden, ob dieser Hund sterben oder zahlen soll, und das weiss der Starke besser als Du."

HAUFF.

ANNUAL EXAMINATION.

C.

1. Compare English and German as regards
 - (a) The use of the present participle.
 - (b) The order of words in a sentence.
2. Illustrate fully the different uses of the verbs *dürfen*, *sollen*, *mögen*.
3. What are the main changes introduced into German orthography since 1880?
4. Indicate the sounds of the vowels in German. Also the different sounds of the consonants *d*, *g*, *s*.
5. Give the genitive singular and nominative plural (*inserting the article*) of the words: *Mensch*, *Huhn*, *Punkt*, *Monat*, *Bundnis*, *Sporn*, *Rat*, *Seeman*, *Armee*, *Theorie*.
6. Distinguish:—*Heer*, *hehr*, *her*; *Fiber*, *Fieber*; *Stil*, *Stiel*; *mahlen*, *malen*; *leeren*, *lehren*; *Thon*, *Ton*; *der Heide*, *die Heide*; *der Kunde*, *die Kunde*.
7. Derive:—
 - (a) Verbs from: *biegen*, *trinken*, *tanzen*, *Farbe*, *kraus*.
 - (b) Substantives from: *stehen*, *klingen*, *graben*, *biegen*, *fliegen*, *schicken*, *stark*, *klein*, *Qual*, *König*. Indicate the gender of the words formed.
 - (c) Adjectives from: *Macht*, *mein*, *über*, *Erde*, *thun*, *Tugend*, *Furcht*, *Stein*.

Give the meanings in each case.
8. Show by examples the different meanings of the prefixes *durch*, *über*, *unter*, and *um*, according as they are separable or inseparable.
9. Illustrate the use of the prepositions *wegen*, *halben*, *zufolge*, *entlang*, *auf*, *neben*, *hinter*.
10. Indicate the force of the prefixes in:—*betäuben*, *entkräften*, *erkaufen*, *verspielen*, *veralten*, *zerbrechen*, *Ursache*, *erzdumm*.

ANNUAL EXAMINATION.

GERMAN.

Examiner: MAXWELL WALKER, M.A.

PAPER B.

A.

1. Translate :—

- (a) Ich bringe das Portrait, welches Sie mir befohlen haben, gnädiger Herr. Und bringe noch eines, *welches Sie mir nicht befohlen* : aber weil es gesehen zu werden verdient.

Write a note on the clause in italics.

- (b) Ich wollte dir das nicht sagen, meine Tochter, bevor dir es dein eigener gesunder Verstand sagte. Und ich wusste, er würde dir es sagen, sobald du wieder zu dir selbst gekommen.—Der Prinz ist galant. Du bist die unbedeutende Sprache der Galanterie zu wenig gewohnt. Eine Höflichkeit wird in ihr zur Empfindung ; eine Schmeichelei zur Betheuerung ; ein Einfall zum Wunsch ; ein Wunsch zum Vorsatz. Nichts klingt in dieser Sprache wie Alles : und Alles ist in ihr soviel als Nichts.
- (c) Was ist das ?—Niemand kommt mir entgegen, ausser ein Unverschämter, der mir lieber gar den Eintritt verweigert hätte.

Write a note on *ausser*.

- (d) Herzlich gern, — Hah ! ha ! ha ! — (*blickt wild umher.*)
Wer lacht da ? Bei Gott, ich glaub', ich war es selbst.—
Schon recht ! Lustig ! lustig ! Das Spiel geht zu Ende

ANNUAL EXAMINATION.

So, oder so !—Aber—(*Pause*)—wenn sie mit ihm sich verstünde ? Wenn es das alltägliche Possensspiel wäre ? Wenn sie es nicht werth wäre, was ich für sie thun will ?—(*Pause*)—Für sie thun will ? Was will ich für sie thun ? Hab' ich das Herz, es mir zu sagen ?—Da denk' ich so was ! So was, was sich nur denken lässt—Grässlich ! Fort ! fort ! Ich will sie nicht erwarten. Nein ! (*Gegen den Himmel.*) Wer sie unschuldig in diesen Abgrund gestürzt hat, der ziehe sie wieder heraus. Was braucht er meine Hand dazu ? Fort (*Er will gehen und sieht Emilien kommen*) Zu spät ! Ah ! er will meine Hand, er will sie !

Explain the circumstances.

2. Write notes on the following :—

- (a) O des eifersüchtigen Künstlers.
 - (b) Du bist seit deiner letzten Mordthat vogelfrei erklärt.
 - (c) Lügen Sie mir eins auf eigne Rechnung vor.
 - (d) Als ob ich es trüge, und als ob plötzlich sich jeder Stein desselben in eine Perle verwandle.
 - (e) Der das Bad mit bezahlen müssen.
 - (f) Ich hatte es dem Angelo auf die Seele gebunden, zu verhüten, dass Niemandem Leides geschehe.
3. Derive : *Deyen*, *plaudern*, *dergleichen*, *Murmeltier*, *Hochzeit*, *Halunke*, *gar*, *fähig*, *Geberde*, *Durchlaucht*, *gescheit*.
4. On what story is *Emilia Galotti* founded ? How is it treated by Lessing.

B.

1. Translate, giving the context :—

- (a) Ihr wisst nicht, schwache Seelen,
Was ein beleidigt Mutterherz vermag.

ANNUAL EXAMINATION.

Ich liebe, wer mir Gutes thut, und hasse,
 Wer mich verletzt, und ist's der eigne Sohn,
 Den ich geboren, desto hassenswerther.
 Dem ich das Dasein gab, will ich esrauben,
 Wenn er mit ruchlos frechem Übermuth
 Den eignen Schooss verletzt, der ihm getragen.
 Ihr, die ihr Krieg führt gegen meinen Sohn,
 Ihr habt nicht Recht, noch Grund, ihn zu berauben.
 Was hat der Dauphin Schweres gegen euch
 Verschuldet? Welche Pflichten brach er euch?
 Euch treibt die Ehrsucht, der gemeine Neid;
 Ich darf ihn hassen, ich hab' ihn geboren.

(b) Sie ist das Götterkind der heiligen
 Natur, wie ich, und ist mir ebenbürtig.
 Sie sollte eines Fürsten Hand entbehren,
 Die eine Braut der reinen Engel ist,
 Die sich das Haupt mit einem Götterschein
 Umgibt, der heller strahlt, als ird'sche Kronen,
 Die jedes Grösste, Höchste dieser Erden
 Klein unter ihren Füßen liegen sieht;
 Denn alle Fürstenthronen, auf einander
 Gestellt, bis zu den Sternen fortgebaut,
 Erreichten nicht die Höhe wo sie steht
 In ihrer Engelsmajestät!

(c) Seht ihr den Regenbogen in der Luft?
 Der Himmel öffnet seine goldnen Thore,
 Im Chor der Engel steht sie glänzend da,
 Sie hält den ew'gen Sohn an ihrer Brust,
 Die Arme streckt sie lächelnd mir entgegen.
 Wie wird mir?—Leichte Wolken heben mich—
 Der schwere Panzer wird zum Flügelkleide.
 Hinauf—hinauf—die Erde flieht zurück—
 Kurz ist der Schmerz, und ewig ist die Freude!

2. State what you know about the metre of *Die Jungfrau von Orleans*.

3. How far did Schiller depart from historical truth in this drama?

ANNUAL EXAMINATION.

C.

1. Translate:—

- (a) Und so wie in den ersten Jahren Spiel und Lernen, Wachstum und Bildung den Geschwistern völlig gemein war, so dass sie sich wohl für Zwillinge halten konnten, so blieb auch unter ihnen diese Gemeinschaft, dieses Vertrauen bei Entwicklung physischer und moralischer Kräfte. Jenes Interesse der Jugend, jenes Erstaunen beim Erwachen sinnlicher Triebe, die sich in geistige Formen, geistiger Bedürfnisse, die sich in sinnliche Gestalten einkleiden, alle Betrachtungen darüber, die uns eher verdüstern als aufklären, wie ein Nebel das Thal, woraus er sich emporheben will, zudeckt und nicht erhellt, manche Irrungen und Verirrungen, die daraus entspringen, theilten und bestanden die Geschwister Hand in Hand und wurden über ihre seltsamen Zustände um desto weniger aufgeklärt, als die heilige Scheu der nahen Verwandtschaft sie, indem sie sich einander mehr nähern, ins Klare treten wollen, nur immer gewaltiger aus einander hielt.

Give the substance of Goethe's description of his sister.

- (b) Als ich aber hinausgesandt ward, die gehoffte Suppe zu beschleunigen, überfiel mich, der ich freilich des Wachens und der Reisebeschwerden nicht gewohnt war, eine so unüberwindliche Schlafsucht, dass ich ganz eigentlich im Gehen schlief.

Explain the circumstances.

- (c) Zu seiner völligen Rechtfertigung aber mag dienen, dass er, von einem falschen Punkte ausgehend, nach beinahe schon durchlaufenen Kreise doch noch auf die Hauptsache stösst und die Darstellung der Sitten, Charaktere, Leidenschaften, kurz, des inneren Menschen, auf den die Dichtkunst doch wohl vorzüglich angewiesen ist, am Ende seines Buchs gleichsam als Zugabe anzurathen sich genöthigt findet.

Who is here referred to ?

ANNUAL EXAMINATION.

- (d) Ein junger Mann jedoch, der, indem sich ältere unter einander von schon bekannten Dingen unterhalten, nur beiläufig unterrichtet wird, und welchem das schwerste Geschäft, das Alles zurecht zu legen, dabei überlassen bleibt, muss sich in einer sehr peinlichen Lage befinden. Ich sah mich daher mit Andern sehnichtsvoll nach einer neuen Erleuchtung um, die uns denn auch durch einen Mann kommen sollte, dem wir schon so viel schuldig waren.
2. Give some account of Goethe's pleasure parties with his friends. Also the substance of a speech made by one of the party. What does he say about his friend Horn?
3. What judgment does Goethe pronounce upon Liscow, Rabener, Bodmer? Describe his meeting with Gottsched.
4. When was "*Aus meinem Leben*" produced?

D.

1. Name the authors of the following works:—*Stimmen der Völker in Liedern*; *Sturm und Drang*; *Oberon*; *Hermann und Dorothea*; *Hermanns-Schlucht*; *die Ahnfrau*; *Geharnischte Sonette*; *Gedichte eines Lebendigen an die Todten*; *Atta Troll*; *Uriel Acosta*; *Der Trompeter von Säckingen*; *Lieder des Mirza Schaffy*; *Ahasuer in Rom*; *Schwarzwälder Dorfgeschichten*; *Soll und Haben*, *Lichtenstein*, *Theodicee*.

Write a short notice on any one of them.

2. Give some account of the *Nibelungenlied*, or, discuss the position of Luther in German literature.
3. Estimate Lessing's service to German drama.
4. State what you know about the Göttingen Dichterbund, or about the life and works of Richter.

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5. Give an analysis of one of the dramas of either Schiller or Goethe. Also give some account of the relations between these two writers.
6. Sketch the main tendencies of German literature in the 19th century, with particular reference to Heine.

ANNUAL EXAMINATION.

JURISPRUDENCE.

Examiner: HON. J. A. TOLE, B.A., LL.B., Barrister-at-Law.

1. Define "Jurisprudence." Give instances of the improper use of the term.
2. Distinguish between a "Right" and a Legal Right.
3. What are the aims of (a) Religion, (b) Public Opinion, (c) Administration of Justice by the State, in relation to Rights?
4. Give instances of a Right suspended on grounds of Public Policy.
5. How do you classify "Persons?" What is the greatest of artificial persons, politically speaking?
6. Define Sanction. Does Sanction attach to International Law? Give a reason for your answer.
7. To what class of persons did the expression "quibus permissum est jus ignorare," of the Roman Law, apply?
8. Give examples of Autonomic Laws. Can they be opposed to Public Laws?
9. What are the chief functions of the State?
10. Discuss shortly the maxim "Actus non facit reum nisi mens sit rea," in relation to "Dolus," "Culpa," and "Casus."
11. What is the effect of the Jury System on the growth of general principles of Law?
12. What do you understand by the terms "Authentic" and "Usual," in relation to "Legal Interpretation?"

ANNUAL EXAMINATION.

CONSTITUTIONAL HISTORY.

Examiner: HON. J. A. TOLE, B.A., LL.B., Barrister-at-Law.

1. Describe shortly the position of Aliens before, and since, the Norman Conquest.
2. What change in relation to Parliament was made in the reign of Ed. III.?
3. What is said of the state of England under the Tudors?
4. What were the Acts of "Supremacy," "Conformity," and "Uniformity"? What religious sects were excepted from the Toleration Act?
5. Give the dates of the cases of "Proclamations" and "Prohibitions," and what was decided by them?
6. State shortly the history of "Monopolies" in England. When were Monopolies abolished?
7. What was the most important change in the Constitution during the Stuart Period?
8. State what you know of the so-called theory of Divine Right? How and when did it disappear?
9. Define "Royal Prerogative." What is the extent of the Royal Prerogative at the present time?
10. When were practising lawyers excluded from Parliament, and why? At what period did their learning, ability, and services work a lasting influence in the cause of freedom?
11. What was decided in the case of *Eutick v. Carrington*?
12. State briefly, in effect, the nature of the Imperial modification proposed at the present time in relation to the great fiscal crisis of 1846.

ANNUAL EXAMINATION.

HISTORY.

Examiner: MR. J. H. TURNER, M.A.

*(Candidates are expected to answer five questions in each part :
numbers 2, 5, 7, 9, 12, 15 must be attempted)*

A.

1. Give a brief sketch of the reigns of (a) Offa, and (b) Edward the Confessor.
2. When did England possess the greatest extent of territory in France? Show how the various French possessions were lost.
3. Write a brief account of *two* of the following :—Dunstan ; John, Duke of Bedford ; Thomas Cromwell ; Thomas Wentworth, Earl of Strafford.
4. What do you know about :—Synod of Whitby, Danelaw, Scutage, Statute of Labourers, Statute of Mortmain, Statute of Praemunire, Poyning's Law?
5. Describe England's relations with foreign countries during the reign of Queen Elizabeth.
6. Give a full account of the career of *either* General Wolfe *or* Warren Hastings.
7. What were the causes of the American War of Independence? Account for the success of the colonists.
8. Write short notes on :—Model Parliament, Mortimer's Cross, Grand Remonstrance, Sedgemoor, Kloster Zeven, Peace of Aix-la-Chapelle. Attach approximate dates.

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B.

9. What were the Corn Laws? Give an account of the agitation that led to their repeal.
10. Write brief notes on :—Manchester Massacre, Lord Durham, Navarino, Rowland Hill, Camperdown, Berlin Decrees.
11. What was the Habeas Corpus Act? On what occasions during the period was it suspended?
12. Give a brief account of the political career of William Pitt.
13. What was the Tractarian Movement?
14. Describe the steps that led to the passing of the Reform Bill of 1832. What were its provisions?
15. Trace the growth of the British Colonial Empire during the first half of the nineteenth century.
16. What were the provisions of the following Acts of Parliament:—
(a) Municipal Corporations Act, (b) Poor Law Act, (c) Bank Charter Act, (d) The Factory Acts?
17. Give an account of the growth of the British railway system during the period.

ANNUAL EXAMINATION.

POLITICAL ECONOMY.

Examiner: MR. J. H. TURNER, M.A.

1. What is Political Economy, and what are its functions?
2. Explain the terms Capital, Final Utility, Seigniorage, Legal Tender, Market.
3. State and explain the importance of the Law of Diminishing Returns.
4. Distinguish between Value and Utility, Value and Price, Market Price and Normal Price.
5. Discuss fully the question of Government Monopolies.
6. Explain the phrases "Localisation of Industry" and "Organisation of Industry." What are the advantages to be secured by production on a large scale?
7. What are the great arguments in favour of Free Trade? Discuss the question of a British preferential tariff for Colonial products from (a) the British, (b) the Colonial point of view.
8. With what economic theories are the names of Ricardo and Malthus respectively connected?
9. Distinguish between real and nominal wages. What are the considerations that determine the wages of any given employment?
10. State the principal Canons of Taxation, and examine the incidence of (a) an export duty on coal, (b) import duty on tea, (c) rates on trade premises.

ANNUAL EXAMINATION.

LOGIC.

Examiner: Rev. H. P. Cowx, M.A.

1. State the fundamental and necessary mental laws on which all correct reasoning must be based. Does formal Logic deal with all valid arguments?
2. In what different ways may terms be divided? Explain the meaning of the technical words you employ.
3. Give the Rules of Definition and comment on them.
4. Discuss the Modality of Propositions.
5. Enumerate the most important kinds of immediate inferences and give examples.
6. Write out the mood Ferison, give a diagrammatic representation of it, and reduce it to the first Figure.
7. Examine the assertion that "All inference is from particulars to particulars."
8. Give a definition of Induction and describe its aim and method.
9. Estimate the value of Mill's Methods of Induction.
10. Write short explanatory notes on the following terms:—
Proprium, Contraposition, Synthesis, False Analogy, Illicit Process.

PSYCHOLOGY AND ETHICS.

Examiner: REV. H. P. COWX, M.A.

1. Distinguish between the cause of sensation and the object of sense-perception.
2. What Instincts do men possess? Indicate their probable origin.
3. Explain how Muscular Feeling aids the Sense of Sight.
4. What is the distinction and the relation between Image and Idea?
5. Explain and discuss the statement that "The Laws of Association hold the same place in Psychology as the Law of Gravitation holds in Astronomy."
6. Give an account of the origin and development of the Will.
7. Give a definition of Ethics and indicate its relation to other Sciences.
8. Mention some of the difficulties which beset the Method of Hedonism.
9. Name the principal doctrines of the Evolutionist School of Ethics.
10. Distinguish between the moral and the non-moral elements in the Fourth Commandment (Sabbath Observance).

GREY SCHOLARSHIP EXAMINATION

PURE MATHEMATICS.

Examiner: PROFESSOR H. W. SEGAR, M.A.

1. (a) Solve the quadratic equation $ax^2 + bx + c = 0$, and discuss the nature of the roots.
- (b) Prove, without assuming a knowledge of fractional indices, that $\sqrt[m]{a^m} = \sqrt[a]{a^m}$.
- (c) Shew that if x varies as y when z is constant and as z when y is constant, then it varies as yz when both y and z vary.
- (d) What is meant by the sum of an algebraical series, (i.) when there is a finite number of terms, (ii.) when there is an infinite number of terms? Shew that it is impossible for a harmonical progression to have a sum in the usual sense.

2. Solve the equations—

$$(a) 2x^2 - 3\sqrt{x^2 + 2x + 14} + 4x - 49 = 0;$$

$$(b) x^2 - xy + 3y = 11, y^2 - xy - 3x + 1 = 0;$$

and form an equation with rational coefficients having the roots $2 + \sqrt{3}$, 5.

3. Shew that—

$$\frac{1}{(y-z)^2} + \frac{1}{(z-x)^2} + \frac{1}{(x-y)^2} = \left(\frac{1}{y-z} + \frac{1}{z-x} + \frac{1}{x-y} \right)^2.$$

GREY SCHOLARSHIP EXAMINATION.

4. Prove that if $y^6 + y^5 - 5y^4 - 4y^3 + 6y^2 + 3y - 1 = 0$
and $y = x + \frac{1}{x}$, then will $x^{12} - 1 = 0$.
5. Shew that, if $ab = cd$, then either of them is equal to—

$$\frac{(a + c)(a + d)(b + c)(b + d)}{(a + b + c + d)^2}.$$
6. Find how many triangles there are whose angular points are at the angular points of a given polygon of n sides, but none of whose sides are sides of the polygon.
7. (a) In any triangle the sum of the squares on two sides is equal to twice the square on half the third side together with twice the square on the median which bisects the third side.
 (b) If from any point on the circumference of the circle circumscribed about a triangle, perpendiculars are drawn to the three sides, the feet of these perpendiculars are collinear.
 (c) Describe a triangle having each of the angles at the base double of the third angle.
8. Inscribe a square in a given triangle.
9. Shew that the bases of all triangles with a common angle and the same perimeter touch a circle.
10. If A, B, C, D be any four points in a plane, and the lines AB, BC, etc., be joined, then any two of the rectangles AB-CD, AC-BD, and AD-BC are together greater than the third, unless the four points lie on a circle.
11. (a) Establish—

$$2 \sin \frac{A}{2} = \pm \sqrt{1 + \sin A} \pm \sqrt{1 - \sin A};$$

GREY SCHOLARSHIP EXAMINATION.

- (b) Give a geometrical proof of either of the formulæ—

$$\tan \frac{B - C}{2} = \frac{b - c}{b + c} \cot \frac{A}{2},$$

$$S = \sqrt{s(s-a)(s-b)(s-c)}.$$

- (c) Shew that the area of a circle = πr^2 .

12. Establish the identity—

$$\sin \frac{2\pi}{7} + \sin \frac{4\pi}{7} - \sin \frac{6\pi}{7} = 4 \sin \frac{\pi}{7} \sin \frac{3\pi}{7} \sin \frac{5\pi}{7}.$$

13. A man observes that when he has walked c feet up an inclined plane, the angular depression of an object in the horizontal plane through the foot of the slope is α ; and that when he has walked a further distance (c feet) the angular depression of the same object is β ; shew that the inclination of the slope to the horizon is—

$$\cot^{-1} (2 \cot \beta - \cot \alpha).$$

14. In a triangle, right-angled at C ,

$$\tan^{-1} \frac{a}{b + c} + \tan^{-1} \frac{b}{a + c} = \frac{\pi}{4}.$$

GREY SCHOLARSHIP EXAMINATION.

MECHANICS AND HYDROSTATICS.

Examiner: PROFESSOR H. W. SEGAR, M.A.

1. (a) A particle moves from rest in a straight line with uniform acceleration; prove the formula to find the velocity after a given space has been described.
 (b) Shew that if two bodies in motion be subjected to equal accelerations their relative velocity is not altered.
2. The wind blowing exactly along a line of railway, two equally quick trains, moving in opposite directions, have the steam track of the one twice as long as that of the other; compare the velocities of the trains and of the wind.
3. A heavy body is projected up an inclined plane, inclined at 60° to the horizon, with the velocity which it would have acquired in falling freely through a space of 12 feet, and just reaches the top of the plane; find the altitude of the plane, the coefficient of dynamical friction being $= \frac{1}{\sqrt{3}}$.
4. Two equal bodies connected by a string are placed upon two planes which are inclined at angles α, β to the horizon, and have a common altitude. Prove that the acceleration of their centre of gravity is

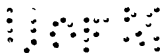
$$g \cdot \sin \frac{\alpha - \beta}{2} \cdot \cos^2 \frac{\alpha + \beta}{2}.$$
5. (a) Enunciate and prove the triangle of forces.
 (b) Find the centre of gravity of the area of a uniform triangle, and show that it is the same as that of three particles of equal mass placed at the corners.

KEY SCHOLARSHIP EXAMINATION.

- (c) Determine the position of equilibrium of a balance when loaded with unequal weights, and discuss the conditions for its sensitiveness and stability.
6. Two rods similar in every respect (the weight of each being W) are capable of motion in a vertical plane round a common fixed pivot at one extremity of each, and they are kept in equilibrium in a position inclined at θ to the horizon by a string placed over the other ends and kept stretched by two equal weights (P, P) at its extremities. Show that
- $$\tan \theta = \frac{2P + W}{2P}.$$
7. A regular hexagon composed of six equal heavy rods, moveable about their angular points, is suspended from one angle, which is connected by threads with each of the opposite angles. Shew that the tensions of the threads are as $\sqrt{3} : 2$.
8. OA, OB are radii of a circular arc AB , the former horizontal and the latter inclined at 60° to OA ; find the coefficient of friction according as a weight Q at B is on the point of moving up or down the arc, a weight P being attached to Q by a string PAQ and hanging freely.
9. A straight uniform wire ABC is bent at B so that the $\angle ABC = \alpha$, and it is then suspended by a string from the point A ; show that it will rest with BC horizontal, if
- $$BC^2 = (AB^2 + 2AB \cdot BC) \cos \alpha.$$
10. (a) Find the pressure at any given depth in a heavy homogeneous fluid at rest, neglecting the pressure due to the atmosphere.
- (b) Investigate the necessary and sufficient conditions that a body may float in a given fluid in a given position, the pressure of the air being neglected.
- (c) Shew how the common hydrometer is used to compare the specific gravities of two fluids.

GREY SCHOLARSHIP EXAMINATION.

11. A mixture is made of 7 cub. cms. of sulphuric acid (sp. gr. = 1.843) and 3 cub. cms. of distilled water and its sp. gr. when cold is found to be 1.615. What contraction has taken place?
12. A solid right circular cone is divided into two parts by a plane through its axis and one of these portions is immersed, vertex downwards, in water. Find the resultant pressure on its curved surface, and shew that it is inclined at an angle $\tan^{-1} \left(\frac{\pi}{2} \tan a \right)$ to the horizontal, where a is the semi-vertical angle of the cone.
13. A thin conical surface of weight W just sinks to the surface of a fluid when immersed with its open end downwards; when immersed with its vertex downwards a weight mW must be placed inside it to make it sink to the same depth as before; if h be the height of the mercury barometer, prove that the height of the cone is $hm \sqrt[3]{1 + m}$.



GREY SCHOLARSHIP EXAMINATION.

MAGNETISM AND ELECTRICITY.

Examiner: PROFESSOR BROWN.

1. Two small pith balls, each of which is charged with ten electrostatic units of electricity, are hung by fine silk fibres from a fixed point, and are kept apart by their mutual repulsion. The weight of each ball is $\cdot 025$ gram, and the length of each fibre 120 cms. Find the distance between the balls.
2. Assuming that a large plate uniformly charged to a density ρ attracts a negative unit of electricity placed near it with a force $2\pi\rho$, show that a sphere charged to a density ρ must attract a unit just outside it with a force $4\pi\rho$.
3. A Leyden jar is charged and placed on an insulating stand; the knob connected with the inner coating is then touched for a moment with the finger, then the outer coating is touched, then the knob again, and so on alternately many times. Give a careful explanation of the change which accompanies each contact and find an expression for the loss of charge after n such contacts.
4. Explain the method of measuring in C.G.S. units the horizontal intensity of the earth's magnetism. Describe the apparatus necessary for carrying out accurately this measurement.
5. Define magnetic permeability and magnetic susceptibility, and show that the two definitions are only different ways of stating the same thing.
6. Give a brief description of Ewing's theory of magnetism, and state the facts which it explains and which are not explicable by the older theories.



GREY SCHOLARSHIP EXAMINATION.

7. The terminals of a galvanometer are connected by an external wire of the same resistance as the galvanometer coil ; one wire from a battery being connected to one terminal, at what point of the external wire must the second battery wire be connected in order that one hundredth of the total current may traverse the galvanometer ?
- 8 Explain the use of the condenser attached to an induction coil. What would be the effect of introducing coils of wire between the condenser and the terminals to which it is usually connected ?



GREY SCHOLARSHIP EXAMINATION.

GEOLOGY.

Examiner: PROFESSOR A. P. W. THOMAS.

1. Describe the mode in which earthquakes are propagated, and show how the source may sometimes be traced. To what causes are earthquakes assigned?
2. What are Gneiss and Mica-schist? In what ways may Gneiss be formed? In what areas in New Zealand are Gneiss and Schists found?
3. Give examples of rock-structures commonly found in mountain-ranges, and draw a section across the Southern Alps.
4. Give a section through the Hokonui system of rocks as developed in the typical district. What is the character of the deposits, and under what circumstances were they laid down? Give some of the typical fossils of the system, and trace the distribution of the corresponding rocks in the North Island.
5. Write an account of the invertebrate fauna of the Silurian period. Distinguish forms which are specially characteristic of the period. Where have Silurian fossils been found in New Zealand?
6. Distinguish the more important varieties of coal and give the evidence as to the mode of formation of coal-seams. What is the character of the floras associated with the chief deposits of coal in Great Britain and New Zealand respectively?



GILLIES SCHOLARSHIP EXAMINATION.

PURE MATHEMATICS.

Examiner: PROFESSOR H. W. SEGAR, M.A.

1. (a) Shew that a ratio, with both of its terms positive, is made more nearly equal to unity, if it is not equal to unity, by adding the same positive quantity to each of its terms.

(b) Shew that—

$$\frac{a}{b} \times \frac{c}{d} = \frac{ac}{bd}.$$

- (c) Prove the ordinary process for extracting the square root of an integral algebraical expression.

- (d) Find the number of permutations of n different things taken r at a time, when r is any integer not greater than n .

2 Factorize—

(a) $1 - 2ax - (c - a^2)x^2 + acx^3;$

(b) $a^4(b^2 - c^2) + b^4(c^2 - a^2) + c^4(a^2 - b^2).$

3. Shew that, if

$$\frac{y+z}{b-c} = \frac{z+x}{c-a} = \frac{x+y}{a-b},$$

then will each fraction be equal to

$$\frac{\sqrt{x^2 + y^2 + z^2}}{\sqrt{(b-c)^2 + (c-a)^2 + (a-b)^2}}.$$

GILLIES SCHOLARSHIP EXAMINATION.

4. Solve the equations—

$$(a) \frac{a-b}{x+a-b} + \frac{b-c}{x+b-c} + \frac{c-a}{x+c-a} = 0;$$

$$(b) (a+b)x + by = ax + (b+a)y = a^2 - b^2;$$

and find what values are possible for—

$$\begin{aligned} x^2 - x + 1 \\ x^2 + x + 1 \end{aligned}$$

x being real.

5. The series of natural numbers is divided into groups as follows :
1 ; 2, 3 ; 4, 5, 6 ; 7, 8, 9, 10 ; and so on. Prove that the sum
of the numbers in the k th group is $\frac{1}{2} k (k^2 + 1)$.
6. The figures 1, 2, 3, 4, 5 are written down in every possible
order : how many of the numbers so formed will be greater
than 23,000 ?
7. (a) Divide a given straight line into two parts, so that the
rectangle contained by the whole line and one of the
parts may be equal to the square on the other part.
(b) If an angle of a triangle be bisected by a straight line
which cuts the base, the ratio of the segments of the
base will be equal to the ratio of the other sides of the
triangle, and conversely.
(c) In equal circles, angles, whether at the centre or the cir-
cumference, have the same ratio as the arcs on which
they stand.
8. Bisect a quadrilateral by a straight line drawn through a
given point in one of its sides.
9. Shew that, if P be any point on the circle circumscribing
the equilateral triangle ABC, one of the lines PA, PB,
PC is equal to the sum of the other two.

GILLIES SCHOLARSHIP EXAMINATION.

10. ABCD is a cyclic quadrilateral, and the sides AB, CD meet in E and AD, BC meet in F. Shew that the circles ABF, DCF, BCE, ADE meet in a point on EF.

11. (a) Prove that $\sin 18^\circ = \frac{\sqrt{5} - 1}{4}$.

(b) Prove (geometrically, if you can)

$$\sin A + \sin B = 2 \sin \frac{A+B}{2} \cos \frac{A-B}{2}.$$

(c) Prove $\log_a m = \log_b m \times \log_a b$.

12. Prove that, in a triangle,

$$\sin (B - C) : \sin (B + C) = b^2 - c^2 : a^2.$$

13. If $a = 123$, $B = 29^\circ 17'$, $C = 135^\circ$, find c , having given

$$\begin{aligned} \log 123 &= 2.0899051, & \log 2 &= .3010300 \\ \log 3211 &= 3.5066403, & \text{diff. for } 1 &= 1352. \\ L \sin 15^\circ 43' &= 9.4327777. \end{aligned}$$

14. Solve the equation—

$$2 \sin 2\theta - (1 + \sqrt{3}) \sin 2\theta + 2 \sqrt{3} \cos 2\theta = 0.$$

GILLIES SCHOLARSHIP EXAMINATION.

CHEMISTRY.

Examiner: PROFESSOR BROWN.

1. State the law of reciprocal proportions. Give examples, and show clearly that the law points to the existence of a definite combining weight for each element.

2. Give some account of the different methods by which nitrogen gas may be obtained. Which method would you select if you desired to prepare a small quantity of the pure gas? State the reasons for your choice of method.

3. Give a detailed account of the process by which you would separate and collect the gas dissolved in a litre of ordinary water. Make a rough estimate, based upon the known laws of solubility of gases, of the composition of the gaseous mixture which you would obtain.

4. What is the experimental evidence upon which the formula NH_3 for ammonia gas is founded?

5. An alloy contains lead, tin, and antimony. How would you separate these elements?

6. What do you understand by the term "salt"? Give instances of basic salts and of double salts. If sodium chloride be a salt, why not also phosphorus chloride?

7. How would you convert 50 grams of lead sulphate into lead nitrate? Explain exactly how you would carry out the operations and give equations.

GILLIES SCHOLARSHIP EXAMINATION.

8. Mention the chief ores of zinc, and give some account of the properties and uses of this metal.

9. What is meant by the expression "abnormal vapour density"? Illustrate your answer by reference to the vapour densities of sulphur, mercury, and iodine.

OX.

GILLIES SCHOLARSHIP EXAMINATION.

PHYSICS.

Examiner: PROFESSOR BROWN.

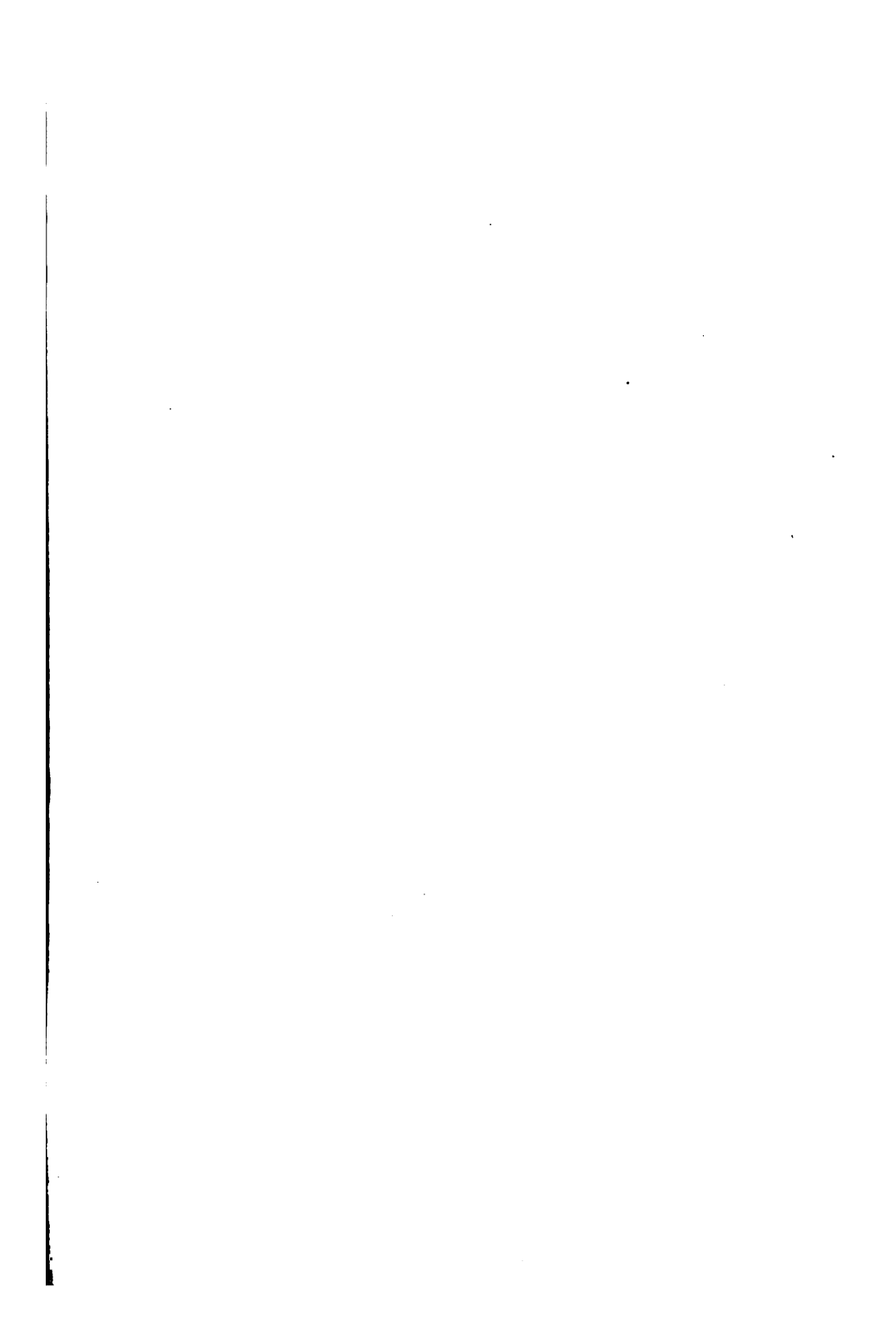
1. State exactly how you would determine the mean coefficient of expansion at ordinary temperatures of olive oil.
2. Pieces of ice adhere when pressed together. Give some explanation of this phenomenon. Would the same explanation serve to account for the welding of iron?
3. Describe the instrument known as the wet and dry bulb hygrometer. How do you account for the fact that its indications are almost independent of wind strength?
4. If you were asked to prove experimentally that the flow of heat through lead is proportional to the temperature gradient, what would you do?
5. What do you understand by a "field of force," and by a "line of force"? Show that lines of force never intersect. Draw the lines of force in the field due to three equal north poles situated at the angles of an equilateral triangle.
6. Define the term "moment of a magnet." Would your definition be applicable to a horse shoe magnet? Give reasons for your answer.
7. A pith ball suspended by a silk thread is attracted by a charged body. Explain exactly what happens. If the charged body is kept near the pith ball for some time, it is generally found that the latter has become charged. How do you account for this?

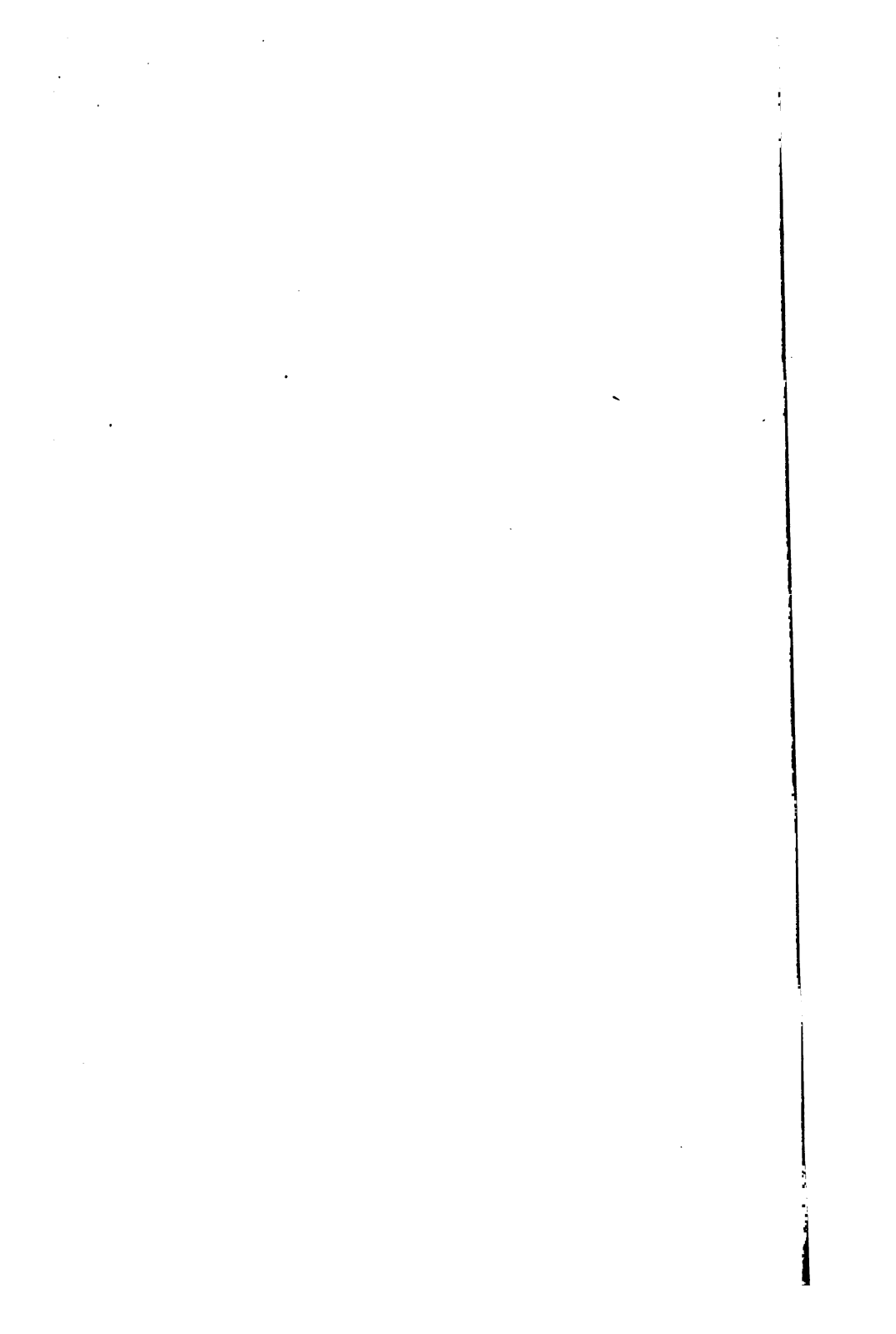
GILLIES SCHOLARSHIP EXAMINATION.

8. Describe Daniell's voltaic cell, and explain the chemical changes which take place within it.
9. Define the ampere and the volt. If the ends of a certain iron wire are maintained at a potential difference of 110 volts a current of one ampere flows through it. How much heat is developed in the wire per second? What change would have to be made in the length or section of the wire in order that the same amount of heat might be evolved when the potential difference at the ends is kept at 220 volts?

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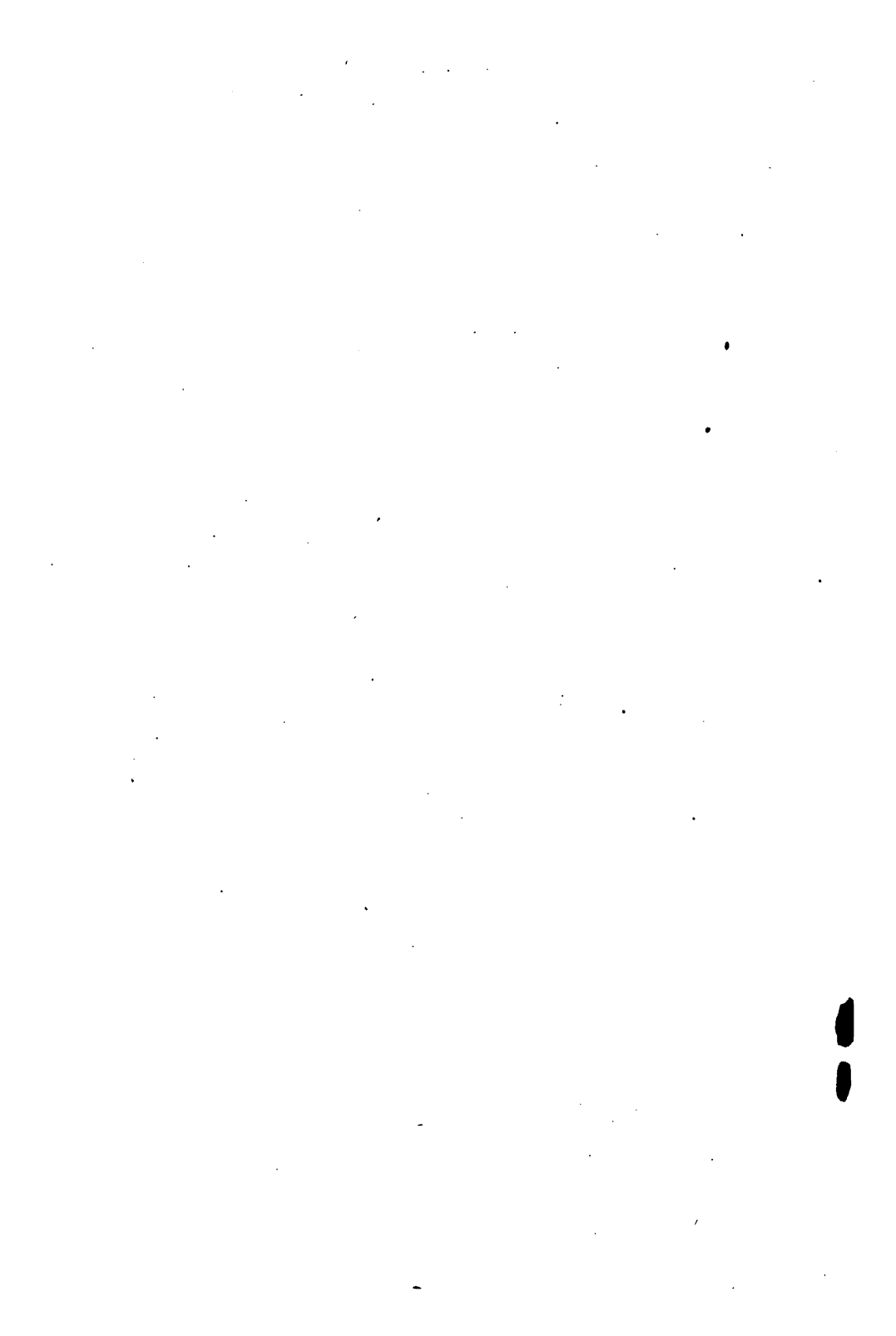
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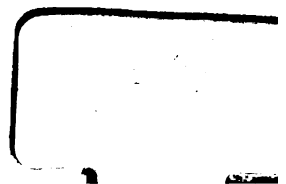




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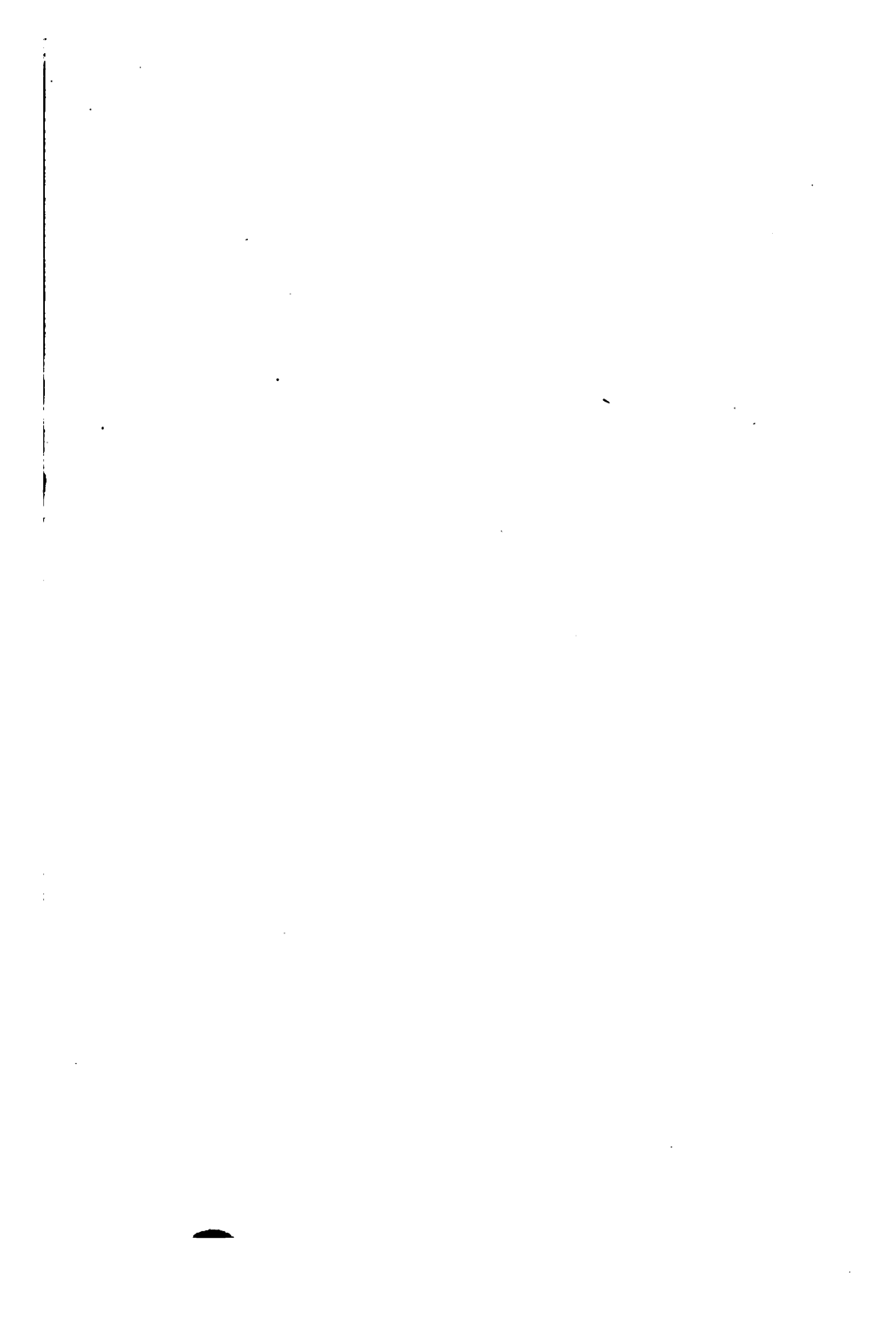


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